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*Handbook for Southport,
medical and general*

David Hudson M'Nicoll

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1. ROUND-LEAVED WINTER GREEN.
(*Pyrola rotundifolia*.)

3. ROUND-LEAVED BELL FLOWER.
(*Campanula rotundifolia*.)

2. GRASS OF PARNASSUS.
(*Parnassia palustris*.)

4. YELLOW HORNED PANSIE OR HEARTSEASE.
(*Viola flavicornis*.)



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HANDBOOK FOR SOUTHPORT,
MEDICAL AND GENERAL,
WITH
COPIOUS NOTICES OF THE NATURAL HISTORY OF
THE DISTRICT.

BY DAVID H. McNICOLL, M.D.,
FELLOW OF THE ETHNOLOGICAL SOCIETY; PHYSICIAN TO THE SOUTHPORT
SEA-BATHING INFIRMARY.



[LORD-STREET.]

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P R E F A C E .

THE greater portion of this little work, which refers to the climate of Southport (the result of fifteen years' observation of its effects upon disease), has been in print two years. It was written as my contribution to a general Guide to the place, which the publisher had intended to issue, in anticipation of the increased demand for information which the great gathering at Manchester in 1857 was expected to produce. The rebuilding of his premises led to the postponement of his scheme for a year, and the sheets already printed were put aside till the confusion and bustle of building had passed away. In the mean time the work grew, and I had become busily engaged in the attempt to lay the foundation, at least, of a Flora and Fauna of the neighbourhood. This enlarged design necessitated prolonged observation and consultation with those who had earned a claim to be considered authorities.

Such have been the causes of the delay, which no one can regret more than myself, and which has been attended by inconveniences to which I need not further allude.

I need not apologise for the Natural History occupying so large a portion of the following pages. The motive has been a desire to encourage useful and agreeable mental occupation on the part of those visitors whose stay is more or less prolonged, and whose minds would, in the absence of some external object of thought, turn and prey upon themselves. This continual contemplation of their own condition—the result of the depression attendant upon disease, and absence from the ordinary engagements of life—needs to be carefully guarded against, and I have not thought it out of place in a medical work to suggest a substitute.

The mode of procedure has been first to record the result of personal enquiry and observation, and then to compare these with previous attempts of the same kind. In this I have received the most essential aid from my venerable friend Mr. Graves, who has been my frequent companion in exploring expeditions, and my constant adviser in difficulties arising from contending authorities. The Botanical list thus procured was collated and enriched by comparison with a MS. list kindly furnished by Dr. J. B. Wood, of Broughton, whose

extensive knowledge of the plants of this locality and original labours in certain departments of general Botany, are well known. Mr. Henry Aughton's list, as it is called (though disavowed by him), has been consulted, and he has cheerfully answered all enquiries put to him. Several plants are entered on his sole authority. The list of Birds was made on the same plan of combined observation and testimony, the valuable list of Mr. Tyrer being freely used for the purpose. I have to acknowledge, with thanks, the assistance for which I am indebted to James Glover, Esq., J.P., and to Mr. Robinson, the latter of whom has obligingly furnished me with the chapter on Excursions in the neighbourhood of Southport.

I may observe, that in one part I have made use of a few paragraphs published by me anonymously elsewhere.

SOUTH LAWN, SOUTHPORT,

June 21, 1859.

HANDBOOK FOR SOUTHPORT.

CHAPTER I.

—— Through days and weeks
Of hope, that grew by stealth,
How many wan and faded cheeks
Have kindled into health !
The old, by thee revived, have said,
“Another year is ours !”
And way-worn wanderers, poorly fed,
Have smiled upon thy flowers.

WORDSWORTH.

ORIGIN AND GROWTH OF SOUTHPORT.

THE chief points in the gradual but rapid progress of Southport towards its present prominent position in public favour, are soon told. We have only to suppose the sandhills of Birkdale prolonged till they meet those at the north of the town—a succession of connected valleys, with pools of water and a variegated carpeting of moss, extending along the present site of Lord-street, with here and there a narrow road leading to the shore—and we have a picture of the place as it might have been seen any time till near the end of the last century. The cottages of a few fishermen stood then, as now, about half a mile back from the beach, and the narrow footpaths which led thither were seldom trod by any but these industrious strugglers with the fickle ocean.

But even at that period the advantage of sea-bathing was not unknown in the cure of disease, and the invalids of Manchester and the neighbouring manufacturing towns were occasionally sent to this part of the coast for the purpose. They chiefly resided at Churchtown, and in the cottages dotted over the country-side, and were conveyed in carts or other vehicles, when the tide served, to their appointed bathing-places at The Hawes, the name by which this part of the coast was then known. As the visitors increased in numbers, the inconvenience of thus travelling two or three miles over rough unformed sandy roads began to be felt, and as in such cases some far-seeing or enterprising man is generally found to play the part of an obscure Columbus, such an one appeared in the person of a Mr. Sutton. He was host of one of the two Inns of Churchtown, and was accustomed to provide accommodation and conveyance for the visitors of whom we have spoken. About the year 1792, to the amazement, and it would appear to the amusement of his neighbours, he began to build a small wooden house, which, gradually enlarged to very moderate dimensions, became the first Inn for the accommodation of the public, under the name of the King's Arms, afterwards changed to the Original Royal Hotel, and which remained till the construction of the new road into Birkdale about four or five years since, necessitated its removal. The popular name of Mr. Sutton was "The Duke," and it will surprise no reader that the result of his enterprise, then thought to be in the highest degree romantic, was named the "Duke's Folly." Not only, however, was he doomed to experience the usual fate of those who are in advance of their times, as shown by this nickname; but his future history was in

accordance with that of too many of his class. After living to see the place which he founded become a thriving village, without partaking of the prosperity around him, he died in 1841, in very reduced circumstances.

The name of Southport was given by Mr. Barton, a retired surgeon from Ormakirk, and one of the earliest admirers of the place, at the entertainment given by Mr. Sutton on occasion of the opening of his house. Notwithstanding the doubts entertained of the prudence of Mr. Sutton, it was soon found that a real want existed, which he had only partially met. Marine cottages soon began to multiply, at first for the accommodation of more visitors, and presently individuals whose families had derived benefit from the salubrity of the place erected permanent residences. Amongst these we find the names of Mrs. Walmsley, Mr. Barton, Mr. Nevill, &c., whose example was speedily followed by others too numerous to mention. The demand for accommodation rapidly increasing, another Inn was deemed necessary, and the Union Hotel was built about the year 1805. The first row of buildings erected with a special view to the reception of company upon a scale of any importance, was the Union Buildings in 1807. This movement was followed by the appearance of Wellington Buildings in 1818, by which time numerous private houses had appeared, and Southport had taken its place upon the full tide of prosperity, which has had no distinct check since then, although the ratio of its progress has been greater in the last few years.

The most important step taken towards the formation of the future town, was in 1825, when an Act of Parliament was obtained by the lords of the manor, the necessary arrangements

for the purpose being entrusted to the then agents, whose successor, Mr. Richard Wright, still retains the position of agent to the owners of the soil, and has ably carried out their views. The chief feature in these plans was the formation of Lord-street, which is a wide central Broadway, a mile and fifty yards long, and is acknowledged to be one of the finest architectural vistas anywhere to be seen. It reaches from Peter-street to the boundary of Birkdale, and when, in the evening, lighted up by gaslights, fifty yards apart, it presents an unusually interesting *coup d'œil*, arising from its great length, its remarkable straightness, and its being so level that it is stated there is not more than one inch of elevation or depression between the ends. Although there are many exceptions, the houses are mostly of an early and old-fashioned class, but when the leases fall out, as they are now rapidly doing, the great advantage of so fine a frontage and the ample space of ground left open about the houses, will no doubt lead to the erection of a superior class of buildings. When this takes place, and especially should an oft-repeated suggestion of regularly planting one or both sides with trees be acted upon, no town in England will present an avenue more attractive and splendid.

The houses in Southport are arranged in five parallel lines of streets—the Promenade, and New Bath-street, between Lord-street, and the shore; and the remaining two, Hoghton-street, and Scarisbrick-street, on the landward side of that main artery. There is great regularity in all the new buildings, and the prevalence of bay windows does something to break what would be otherwise an unpleasant uniformity.

The Promenade faces the shore, and is remarkable both for the handsome elevation of the houses built thereon, and for the facilities it affords for enjoying the bracing breezes, as they come wafted from the wide and open sea, bringing health and vigour on their wings. It was about the year 1834, that Peter Hesketh Fleetwood, Esq., projected and first caused to be constructed "a wall and sea-fence, with a footpath, walk, or Promenade, and a distinct carriage and horse road," extending about four hundred yards along from Nevill-street towards Coronation-walk, and he leased for ninety-nine years the land fronting the intended Promenade, covenanting with the lessees to keep the same in repair during the said term. Sir Henry Bold Hoghton, the owner of the land in continuation along the Promenade to Coronation-walk, appears shortly afterwards to have leased the same to a Mr. Hill upon somewhat similar terms. In the year 1837, Sir H. B. Hoghton leased to the Victoria Baths Company the land from Nevill-street to Seabank-road, the Company covenanting within ten years to "build a good and substantial sea-wall, of such and the like materials, strength, and durability, as the sea-wall lately erected by Peter Hesketh Fleetwood, Esq., and maintain and keep the same in repair during the said term." Charles Scarisbrick, Esq., in or about 1843, purchased the fee simple in remainder of all the property before mentioned, and thereupon became possessed of all control over the same. Mr. Scarisbrick also purchased the leasehold interest of several of the lessees under Mr. Hesketh Fleetwood, and the entire interest of Mr. Hill, the sole lessee under Sir H. B. Hoghton, and thereby became bound to construct the sea-wall, and keep the same and the Promenade and carriage-drive, from Nevill-

street to Coronation-walk, in repair. Some portions of the land between Nevill-street and Coronation-walk have since been leased by Mr. Scarisbrick or sold in fee; and the respective lessees or purchasers have consented to "uphold, maintain, and keep in good, sufficient, and substantial order and condition," the present wall and sea-fence or slope, and also to "maintain and keep the present footpath, walk, or promenade, and also the carriage and horse road or drive." In November, 1845, the Baths Company purchased from Mr. Scarisbrick the reversion of the land leased to them by Sir H. B. Hoghton; and, at the same time, entered into similar covenants for keeping in repair the sea-wall, promenade, &c., together with "the posts, chains, and rails." In order more effectually to enable Mr. Scarisbrick to enforce all these covenants, a high rent was reserved on each plot, but which ceased to be payable when and so long as the covenants were duly performed. The Promenade was long allowed to remain in a dilapidated condition, but its effectual reparation having been very satisfactorily completed, its future management will be taken by the local authorities, and it is now a delightful place of resort for the purposes which its name indicates. From end to end, the Promenade is nine hundred and sixty yards long; and, with a tiled footpath from the boundaries of the houses, a carriage drive, and a well-laid asphalted walking way, there are few such esplanades to be found in England. From the Promenade a splendid view is obtained of varied objects of attraction and interest. Seaward, vessels may continually be descried ploughing their way through the great waters, and giving life and beauty to the scene. The Isle of Man can occasionally be distinguished in a north-westerly direction, but the

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opportunities for seeing the island are rare, and perhaps the less frequently they occur the better, as the phenomenon is said to be invariably followed by tempestuous weather. The Cumberland and Westmoreland mountains are distinctly seen looming in the distance, the Black Combe, which is 1919 feet above the level of the sea, into which it appears to dip, being the most conspicuous of the whole range. The hills in the neighbourhood of Lancaster, with Longridge Fell, range about north-east; and in a more easterly direction Rivington Pike marks the horizon. These hills, Mr. Glazebrook tells us, form part of that grand chain of hills extending north and south from the borders of Scotland to the centre of Derbyshire. The different portions of this chain are at present known under various local names, but the Roman colonists of Britain, whose attention so prominent a feature in the physical geography of the island could not escape, denominated them the Penine Alps, as appears from the following passage in Richard of Cirencester's description of the Roman state of Britain; he is treating of the Roman province Maxima, which includes all the northern counties of present England:—"Totam in aequales fore partes provinciam dividunt montes Alpes Penini dicti. Hi ad fluvium Trivonam surgentes, continuâ serie per milliaria septentrionem decurrent." "The mountains called the Penine Alps divide the province into almost equal parts. These, near the river Trent, run towards the north in a continued line for 150 miles." Turning to the west, the bold range of Welsh mountains rivets the attention and delights the eye. Snowdon is seen to

Lift its awful form,
Swell from the vale, and midway leave the storm.

On the Promenade there are two Hotels, the Victoria and the Royal; the Baths Company's extensive premises are also situated here, and the commodious building erected for the Strangers' Charity stands in a line with the houses on the Promenade.

The most strange perplexity has arisen from the increased numbers of that small number of families by whom this solitary neighbourhood was, in the first place, peopled. These descendants of the aboriginal inhabitants demand a passing notice. Wrights, Balls, and Rimmers (Rymer is the orthography in the old parish register) now abound in distracting confusion, and there is no doubt that these three names are those of the families which originally settled on these shores. They are supposed to have subsisted by following the occupation of fishing, as many of the inheritors of their names do to the present day. It is said that up to a recent period, the privilege of descent from the veritable "old stock" was highly prized and religiously respected, and that "outcomelings" (as strangers or new settlers were once designated) were regarded with compassionate condescension. This and the more questionable feelings of jealousy and suspicion by which it was too often accompanied, have, however, been most effectually rubbed out by constant contact with fresh importations. As an instance of the strange complications which are the consequence of the number of families bearing the same name, we may mention the fact that in one society, having about two hundred members, there are no less than six William Balls, and Wrights and Rimmers without end. They are distinguished from each other by numerals attached to their names, in the order of their respective seniority of

membership; but it is still requisite, for the sake of perfect identity and distinction, to resort to an ingenious practice of mentioning the names of their progenitors for generations gone by. Thus it is common to meet with "Tommy's Jem's Davy's Jem," and "Nell's Dick's Tom." "Katty's Dick" is a well-known warrener, and "Dicky-under-th'-hill" was a respectable farmer. So accustomed are the native Meols-men to this mode of discrimination that many of them would puzzle long to direct you to John Wright, and wonder whoever such an individual could be, whilst the person meant might be their own parent, and very readily discoverable under such an appellation as "Priscilla's John."

The means for the moral improvement and education of the inhabitants are provided in gratifying abundance. There are three Churches, auxiliary to the Parish Church, as well as a Roman Catholic, a Wesleyan, and an Independent Chapel, and a Friends' Meeting House; and we believe that all have attached to them Sunday Schools, and most of them Day Schools. The decorum and quietness observable on Sundays strikes most strangers, and the amount of crime with which the local magistracy have to deal is small indeed when the number of inhabitants is considered.

Although it is not needful to specify those institutions which are common to other localities, there are two so peculiar to the place that they deserve special reference; these are, the Sea Bathing Infirmary, or Strangers' Charity, and the Marine Fund.

The Strangers' Charity dates from a very early period in the progress of Southport. In the year 1806, some benevolent ladies, among whom the late Mrs. Halsall, Miss Leigh, and

Miss Johnson were prominent, established a charitable fund on a small scale, with a view to enable the poor from the larger towns to receive the benefit of sea air and sea bathing, by a weekly payment towards their expenses. The name of Miles Barton was early connected with the infant institution, and the late Thomas Ridgway, Esq., of Horwich, near Bolton, became so active a friend of the Charity, as to be called its founder, and shortly after, Mr. Nevill, of Wigan, gave to it much of his time and energy.

From these small beginnings the institution has continued to grow and prosper, until it has become the second of the kind in the kingdom, being exceeded in extent only by the Margate Royal Sea Bathing Infirmary. It numbers among its active supporters some of the most philanthropic characters in several of the larger towns, and is aided by many of the great landholders and extensive manufacturers in the county, as well as by many of the clergy. During the past year, 1161 patients partook of the advantages it has to offer. Its medical service is performed by two Physicians and three Surgeons. Since the erection of the new Building in Seabank-road, in May, 1853, the mode of carrying on the institution is this:—each patient is admitted for a period of three weeks, by virtue of a recommendation from his patron, and becomes entitled to lodging, medical attendance, medicines, and hot and cold sea-baths, with an allowance of five shillings a week for his food, for the preparation of which ample accommodation is afforded; in case of the building being full, and the patient having to lodge out, seven shillings a week are allowed. Each recommendation costs twenty-four shillings, and may be renewed at the expiration of the term in favour of the same

person, if the case will justify it, and the patron is willing. The business is conducted by a Board, who sit every Thursday for the admission of applicants, under the presidency of the indefatigable Treasurer, Mr. Geo. Darwell, who succeeded his brother, the late lamented Mr. James Darwell, in that onerous office.

The Marine Fund was established at Southport, in the year 1817. Like other charities it has its office-bearers, who are responsible for its integrity and administration.

The following extracts will put the reader in possession of the motives of its originators, the course adopted for its establishment, and the principal rules passed for its management. "The object of this Charity is to reward the inhabitants of this Parish who save, or attempt to save, Lives and Property in cases of shipwreck, and who give assistance to vessels in distress.

"For this purpose it is proposed annually to solicit the contributions of those who visit Southport, and it is hoped that in the course of a few years a fund will be created the interest of which will be sufficient to meet the claims that may be made.

1. A reward will be given for the life of each person saved from a wreck.

2. A reward will be given of £2 10s. to the first boat that reaches a vessel in distress, or gives effectual assistance.

3. A reward will be given to the second boat of £2, and to the third the sum of £1 1s.

4. Independent of the sum each boat may be entitled to, a further reward will be given for every life saved, as expressed in the first rule.

5. The Committee reserves to itself, in every instance, the power of increasing or diminishing, or entirely withholding premiums, according to the circumstances of the case."

Subscriptions to a greater or less amount continued to be received up to the year 1837. The principal sum, which may be said to have gradually increased, more especially of late, is now £500.

The calls upon this excellent Charity have varied of course in frequency, but not a single year since its foundation seems to have passed, in which at least one successful claim to its bounty has not been established.

The present owners of the land on which Southport, and, in fact, the whole Township of North Meols stands, are Charles Scarisbrick, Esq., of Scarisbrick Hall, and the Rev. Charles Hesketh, M.A., the latter of whom is Rector of the Parish. The Hesketh family, who were the builders of Meols Hall—now a farm-house in the occupation of Mr. Thomas Baker,—were the original proprietors of the soil. Nicholas Hesketh died, leaving only two daughters, between whom the estate was left in moiety. One of these daughters married into the family of Bold, of Bold Hall, and the other into the Fleetwood family, of Rossall Hall. A division was thus made for the first time, and the arrangement remained undisturbed until the time of Peter Patten Bold, Esq., who, by verbal agreement, exchanged some farms with his co-proprietor. Robert Hesketh, Esq., (the father of the present Rector) and Mary Patten Bold afterwards the Princess Sapielha) made some further exchanges. After the death of the Princess, the estates came into the possession of Sir Henry Bold Hoghton, Bart., and his wife Dorothea; and Peter Hesketh Esq., (the present Sir Peter

Hesketh Fleetwood, Bart.) inherited his father's interest in the parish. Between these two owners a systematic arrangement for the exchange of land, so as to avoid the intricate intermixture of farms and fields, was effected, and subsequently (in the year 1825) sanctioned by Act of Parliament. Sir Henry Bold Hoghton's eldest son afterwards sold his Meols estate to Charles Scarisbrick, Esq., of Scarisbrick Hall, who took possession in February, 1844; and somewhere about the same time the Rev. Charles Hesketh purchased his brother's interest in the property.

The immediate vicinity presents no scenes of picturesque beauty to captivate the eye. Excepting the sandhills, the country around is perfectly flat, the vegetation is scanty, the trees are of small dimensions, often bending away from the sea. Nevertheless, the views of distant mountain scenery, both from the Promenade and from the inland side of the town, are pleasing and interesting, and when seen in early morning or on a clear evening, have a peculiar charm. To a stranger, the series of deep cuttings through the mosses, forming part of a vast system of drainage, forms one of the most remarkable peculiarities of the district. They all converge towards Crossens, where is the outlet of the waters from the flat land as well as of the former Martin Mere. This last inland lake was formerly of great extent, and was called by Leland, three hundred years ago, "the greatest meare" of Lancashire. Camden, forty years after, says, "Near the mouth of the Dougless is an extensive meer called Merton, which discharges itself at a mouth of its own, and presently after meets the Ribble in its estuary." The various attempts at the drainage of this large mass of water, of which little besides

the name now remains, are amongst the most interesting narratives of the gradual improvement of engineering science on record, though we can do little more than refer to them. The first serious attempt to drain Martin Mere was made by Thomas Fleetwood, Esq., of Bank Hall, who, in the year 1692, obtained an Act of Parliament for the purpose. He began his operations by making a canal or sluice, 24ft. wide, from the Ribble mouth through an embanked saltmarsh, and then through a moss or bog, in North Meols, about a mile and a half in length; and this canal he continued through the lowest part of the mere. To prevent the sea from rushing up the canal and overflowing the mere, which was 10ft. lower than high water-mark at the spring tides, he erected in this canal, near the sea, a pair of flood gates, which shut when the sea water rose higher than those in the canal, and opened again by the sluice stream when the sea retired. Some further operations took place in 1714, and the measures then adopted promised effectually to dry that land which had probably been inundated ever since the deluge. Three years afterwards Mr. Fleetwood died, entertaining the belief, which his family fondly cherished, that he had effected the great object of his life; and a monument is erected to his memory in the parish church of North Meols, bearing a Latin inscription, which announces that "he wished his remains to be buried here, because he had drained and made into solid land the immense Martinensian marsh, having taken off the water by a fosse to the neighbouring sea." The inscription adds, that "he executed this work, which our ancestors durst not attempt, and which posterity will scarcely believe, at a very great expense, and with a view to the public good, not his own." It will be easily supposed that the

expense was indeed great, when it is stated that not fewer than 2000 workmen were sometimes employed upon this gigantic undertaking. Eight ancient British canoes were found during the progress of the drainage (one is now in the British Museum), some containing plates of iron. About the same time, some other ancient remains were discovered, of which Dr. Leigh has given engravings in his Natural History of Lancashire, with the remark, "I look upon them to be the greatest relics of antiquity in the universe."

Unhappily, all Mr. Fleetwood's labours were in vain; a few years after his lease expired, the flood gates and walls at the entrance of the canal were washed down by an unusually high tide, and things appear to have gradually reverted to their ancient state.

The late Thomas Eccleston, Esq., of Scarisbrick, undismayed by the failure of this enterprise, began operations with a similar view, in the year 1781, the account of which will be found in the 7th volume of the "Transactions of the Society for the Encouragement of Arts, Manufacture, and Commerce." The success of his plan was such that, in the year 1784, several acres of the reclaimed land were sown with spring corn, and yielded a tolerable produce. The year after, barley and oats were sown, and sold for £11 the Cheshire acre, the purchaser to cut and carry off the crops at his own expense, though a few years before the land did not let for more than four shillings the acre.

We cannot enlarge upon the subsequent means adopted to recover a vast acreage of valuable land. It is sufficient to say Martin Mere exists now only in name.

The village of North Meols, or more generally Churchtown, the parish church being situated here, is about two miles from Southport, and is much frequented during the season for its extensive strawberry gardens. The church is a plain structure, and contains, amongst other monuments, four marble tablets to the memory of as many members of the Fleetwood and Hesketh families, one of them by Nollekens. North Meols Hall, a lofty brick building, formerly the residence of the Heskeths, lies a little to the south of the church, and is occupied as a farmhouse. The village consists of one large irregular street of houses, principally thatched. Many of the inhabitants are engaged in fishing and agriculture, whilst others are occupied in the silk weaving, under the direction of agents from Ormskirk and Preston; an occupation one would hardly have expected to find in a locality so far removed from manufactures.

CHAPTER II.

SOUTHPORT AS A RESORT FOR INVALIDS.

GENERAL REMARKS ON CLIMATE—GEOLOGY OF THE DISTRICT—

LOCAL CLIMATE OF SOUTHPORT.

THERE can be no doubt that the British Islands only existed in former times subject to the rigours of a Polar climate. At this period our island was a scattered archipelago of murky misty islets, its chief phenomena the mighty crushing glacier, and the electrical flashings of Boreal lights. By what means and through what processes they have been brought to their present state is in some measure open to conjecture—the most probable being changes in ancient sea levels, and the establishment of strongly defined ocean currents from the mass of heated water round the Equator.

The position of the British Islands on the map, and the extraordinarily mild temperature they enjoy, are so contradictory that it might puzzle the theorist, as well as the practical man, if he attempted to explain it, without taking into his calculation the above all-important influences. Within a few degrees of the region of perpetual snow, it has

an atmosphere equal to that of any part of the temperate zone. To tell the nervous, the consumptive, or the hypochondriac that they are living in a country about the same distance from the Arctic Circle as are the inhabitants of Labrador and Kamtschatka would at the least add an extra chill; to tell the delicate invalid hastening to the sheltered coast of Devonshire that he is fixing his winter dwelling to the northward of the latitude of the Banks of Newfoundland, would certainly impart an unwelcome shock to his sensibilities; but isothermal lines are not coincident with parallels of latitude, and the modifying circumstances of climate do more than correct the evils of position—they very often introduce a bland and salubrious element in situations of the most unpromising description.

The insular position of these islands, after all, would be of little avail had they not some more vital bond of union with more genial climes. That magic "circle of marriage with all nations" would form but an icy bond were there not some deep mysterious hidden currents bringing life and warmth to our coasts. The extent of influence possessed by the great gulf-stream in these climatic modifications is not yet fully understood; but there can be no doubt that it has had a large share in the changes to which we refer.

A nation and its destiny may be linked by very slender threads. Should any deep mysterious but all-potent cause ever throw those mighty activities from working for us into collision, the historian's fancy-sketch of the meditative New Zealander may be realised by means of agencies of which he never dreamed.

It may be stated generally that the sanitary condition of most towns in this country is not altogether dependent upon

their aspect, population, manufactures, &c. It is probable that the substratum on which they are placed has more to do with the singular discrepancies found in the Registrar General's Reports, in regard to the ratio of mortality, than is commonly believed. In this way we may account for at least a portion of the difference between Liverpool and Manchester, Birmingham and Bath, Glasgow and Bristol, &c.

The effect of proximity to the sea in softening and warming a climate has long been recognised. Owing to the penetrability of water by radiant heat, and the perpetual agitation and intermixture of its superficial strata, its changes of temperature are neither so extensive nor so sudden as those of the land. An island is always found to possess a milder air than land in the same parallel of latitude forming part of a continent. Where the island or coast is at the same time distant from mountainous country, the amelioration is still more striking. On this subject Sir Charles Lyell well observes,—“The ocean has a tendency to preserve everywhere a mean temperature, which it communicates to the contiguous land, so that it tempers the climate, moderating alike an excess of heat and cold. The elevated land, on the other hand, rising to the colder regions of the atmosphere, becomes a great reservoir of ice and snow; arrests, condenses, and congeals vapour, and communicates its cold to the adjoining country. For this reason, Greenland, forming part of a continent which stretches northward to the 82nd degree of latitude, experiences under the 60th parallel a more rigorous climate than Lapland under the 72nd parallel.” In addition to this general result of proximity to great masses of the ocean, some localities derive additional benefit from certain great marine currents which transport their waters

from about the Equator. It is generally believed that the water encircling our shores during the winter months is some degrees warmer than our atmosphere. It is also considered that the west coast of our island is milder than the east coast. Why this should be so is not easily explained, without bringing into the question the qualifying influences supposed to be derived from the currents of heated water setting from the Equator. Neither in the winds that blow nor the sun that shines can these differences be accounted for. It is not a theory but a positive fact that a portion of the gulf stream impinges on the west coast of Ireland, bearing abundant traces on its bosom, in the shape of tropical weeds and plants, of the hot latitude from which it has travelled. There is, indeed, little doubt that these shores would enjoy a much milder climate than they do at present did they not contribute to the sea so many large rivers fresh from the hills, serving to put a barrier of cold water round our shores, and absorbing the surplus heat from the warm currents. Many significant data might be procured if proper observations were made at such parts of our coasts as are favourable to the required experiments. Many of our fashionable summer resorts on the coast would be found to owe the peculiar mildness of their climate to the proximity of these currents, and freedom from any great outlet of fresh water into the sea.

The data derived from some observations on the channel waters off Southport, though as yet too limited in number to lead to any decided generalisation, tend to strengthen this view. Any strong sea currents setting over the west coast of Ireland would be deflected towards the estuary of the Mersey, and as the currents of the Dee and Mersey would prevent

them ascending those channels, these waters would be pressed towards the north, and would tend to scoop out a wide bay on that part of the coast, as we find has been done.

The fact has been *proved*, that while the *deep* sea water in the channels remains of an average temperature, that of the flood tidal-water coming over the banks is higher than either the sea or the air. Having no fresh water to meet (we speak of that part of the coast directly opposite Southport, and out of the influence of the Mersey and the Ribble) it gives out its surplus temperature, and is probably one cause of the mildness and salubrity of Southport in the winter.

The scanty supply of trees, and those of small dimensions, found near the sea side, though to some extent it mars the beauty of a neighbourhood, is in reality of considerable sanitary importance, and is an instance of those compensating arrangements so often found in nature. The growth of large trees implies the presence of much moisture in the ground, and is the cause of much moisture and coldness in the atmosphere. Any impediment to the free circulation of air, or any screen which shades the earth from the solar rays, becomes a source of humidity; and wherever dampness and cold have begun to be generated by such causes, the condensation of vapour continues. This is especially the case where the aqueous vapour in the atmosphere is great, and the direct rays of the sun are powerful. Humidity is always found to be increased, and to be more uniformly diffused throughout the year, in proportion to the gradual spreading of wood. The evidence in support of these statements is ample; thus in Barbadoes and Jamaica the felling of forests has greatly diminished the quantity of rain; the climate of

Tuscany has become warmer in winter and colder in summer from the same cause; and the rapid clearing of the country in the United States of America is gradually producing the same results. Although it is doubtful whether the *mean* temperature has been raised in these cases, there can be no doubt that the extreme temperatures of midsummer and midwinter have been brought nearer to each other. In this way the diminution of forests has been followed by results similar to those which follow the drainage, on a large scale, of any tract of moist country. The beneficial effects of the lessening of extreme vicissitudes of temperature upon the human frame must be readily apparent.

Southport is situated upon the edge of a series of recent deposits overlying the western edge of the Trias or New Red Sandstone of the south of Lancashire. The rocks of the latter form the high ground towards Ormskirk and Liverpool. The extent of these diluvial deposits is perceptible in the low flat land extending from Waterloo to the north of Southport. From sections in the course of streams and in artificial openings we find four or five feet of peat or dark vegetable soil, reposing upon sand for a considerable depth down to the New Red Sandstone. The surface of the peat beds appears to dip towards the sea, and is usually covered with sand to the extent of three or four feet near the coast line. More inland, the peat beds form the surface of the ground, turf being there collected for fuel. At Formby the peat is seen upon the shore, and in other places numerous stumps of trees indicate the site of an ancient forest.

It has usually been considered that a general subsidence of the mainland is necessary to account for the changes of level

which have undoubtedly taken place along this part of the coast; and it has been supposed that a great part of the western coast of Britain has subsided several feet within historical times, but we believe the data for such a conclusion to be entirely limited to alluvial deposits, such as those now under consideration. That many variations of the surface have occurred in this island no geologist can doubt; but in the present case we think the subsidence may be of a merely local character, resulting from the sinking and contraction of the loose sands underneath the peat beds.

It may be safely concluded that the sand has originally accumulated from the combined effects of the winds and currents heaping it up until dry, its surface becoming clothed with vegetation; a deep soil gradually accumulated afterwards, covered with forest trees. The position of this vegetable soil is now so low and so little above the level of the sea, that there can be no doubt but that the subsidence it has undergone obstructed the drainage and destroyed the forest.

After a careful consideration of the subject we cannot find any evidence that the subsidence has extended beyond the boundary of the alluvial deposits—the degree of it increasing as we approach the sea. The peat beds dip towards it, and in some places are under the rise of spring tides, so that a sinking or contraction of the underlying sands seems to be the only cause to which the phenomenon can be attributed.

The few feet of sand usually covering the peat beds near the shore is merely blown sand, such as are the sand hills, the tendency of the winds and currents being still to heap and deposit sand along this part of the coast.

The above general remarks upon the circumstances which modify all climates, and upon the local peculiarities of Southport, must be borne in mind in proceeding to consider the claims which that place possesses as a resort for invalids. Sharing as it does with the most favoured summer resorts those advantages derived from immediate proximity to the sea, it has certain well-marked and more immediately local advantages which few other places possess in an equal degree.

Foremost amongst these we place its open sea aspect, yet well sheltered position on the coast. Situated near the bottom of a deep sandy bay, it has all the advantages enjoyed by other neighbouring watering places, without the exposure to bleak and piercing winds attaching to some towns on the north west coast. It is bounded on the north and north east by a chain, or rather a crescent of hills, which shelter it in great part from the east and north east winds, the prevalence of these being limited to the months of April and May. Secondly, we notice its having two or three well-marked and distinct climates; the tide receding a considerable distance leaves a large expanse of sand to be heated by the sun—which has the effect of warming the sea-breeze passing over it—giving to Southport that of which few, if any other, watering places can boast, viz., a bracing sea atmosphere, and yet one *thoroughly dry*. Whether the air immediately in contact with the sand, while parting with its moisture, does not take up some of the peculiar constituents only found in sea water; or whether a stratum of dry air passing over an extended sandy surface, at a high velocity, has not its force of electrical tension highly increased and condensed—are questions worthy of consideration, both of which have been adduced as explanatory

of the peculiar sanitary effects of Southport in some diseases. The relative electrical state of the earth and the atmosphere, affords the great fluctuating health-scale to which man in his present physical state is subject. Whether it be fine or whether it be wet, is in all probability dependent upon the greater or less readiness with which the atmosphere surrounding us parts with the electricity it may possess, in alternation with the earth's supply of the same important element. Any agency which induces the atmosphere to part with its due quota, is a provocative of disease.

In addition to oxygen and hydrogen in the atmosphere, there is another element lately discovered, to which the name of *ozone* has been given. When electrical or galvanic machines are in action, the peculiar smell of ozone is readily distinguished. From this circumstance, it is thought that its production is closely connected with the electrical condition of the atmosphere. It is supposed to be a product of the partial decomposition of water, or a binoxyde of hydrogen. At any rate it is always found most plentifully over the surface of the sea, and may be considered as the secret potent element that gives life and health by its presence, and whose absence is always a concomitant and precursor of disease. It must exert a powerful influence in the atmosphere, as all noxious effluvia and miasms are destroyed by its presence, its deficiency or absence serving to account for the prevalence of cholera, fevers, epidemics, &c. It may be regarded as the great purifier of the air, and, owing to its continual exhaustion by oxydating processes, it is difficult to discover its presence in towns or cities, or where there is much vegetation. It is found most plentifully, as before stated, *on* and *near* the sea.

This substance possesses more powerful oxydizing qualities than any other compound ever discovered. It is constantly produced in the atmosphere under all circumstances which determine either electrical or chemical change.

The necessity for some such agent will be rendered evident, when it is remembered that the atmosphere is constantly receiving exhalations from the earth and its inhabitants. Without a provision for the removal of these, they would speedily render it more injurious to all forms of life than carbonic acid gas itself, though to that alone we have been in the habit too commonly of attributing atmospheric deterioration.

The principal property of ozone is to combine with and change in the most rapid manner all animal matter—except albumen in its fresh state—thus constituting it the natural provision intended to correct those deleterious exhalations which the air receives, into innocuous matter. The atmosphere, artificially charged with ozone, immediately deprives the most putrid solid or fluid bodies of their disagreeable smell, and even sulphuretted hydrogen is instantly decomposed by it. When any epidemic such as cholera is raging, the atmosphere always shows a diminished quantity of ozone, and such diseases are directly attributed to that fact. The primary effect is seen in the great mass of vegetation covering the earth's surface, giving off under an atmosphere of low electrical tension new and abnormal exhalations, which, with the organic poison from the masses of human beings congregated in large towns, find their way into that atmosphere, when deficient in the important element intended to keep such deleterious exhalations in check. Respecting the ravages of

cholera, it is a remarkable fact that Birmingham and Berlin have almost entirely escaped, owing, it is supposed, to the metallic manufactures in the neighbourhood which are supposed to elicit ozone.

Returning again to the climate of Southport, we may remark, that having two water lines, at great distance apart, each has its own distinctive quality ; that at high water mark having all the characters of the stronger and more stimulating one at low water, but in a more modified and milder degree. Beyond this inner line, and more in the line of the streets of the town, the sea breeze is found still more softened ; the atmosphere is buoyant, and remarkably free from impurity and humidity. Our being able to avail ourselves of the varied qualities of these distinct climates, according to the changing circumstances of the invalid, is of great practical importance in the treatment of disease. Nor should the patient himself neglect to study and observe these differences, which, though apparently trifling, are capable of helping or retarding the progress of his cure. An injudicious walk on the promenade, in cold weather, has often undone the work of weeks ; whilst, on the other hand, from the want of suitable guidance, the period of convalescence has been needlessly prolonged, from an undue fear of exposure to a bracing atmosphere.

The character of the soil, and of the surrounding country, adds greatly to the sanitary value of Southport. Being skirted on three sides by ranges of sandhills, it is not only sheltered from east and north winds, but the soil, consisting chiefly of sand, retains no moisture or rain on its surface, a heavy fall of rain leaving no trace after a very short time. The fall, indeed, is slight in comparison of the surrounding country, a

circumstance partly accounted for from the vicinity of the hills—these latter attracting the rain clouds ere they reach the coast. The absence in its immediate vicinity of any considerable body of fresh water, is another climatic advantage, very few places having the same extent of country free from running or stagnant water. The facility thus afforded for taking exercise, is of the utmost importance to invalids. In localities situated upon the clay, a heavy shower, for even a short time, involves the withdrawal of out-door exercise for a day or two, in consequence of wet roads and atmospheric evaporation. Under such circumstances, which of course are of frequent occurrence, the invalid is either compelled to encounter the risks attendant upon wet feet and breathing a damp air, or he is precluded from the muscular exercise, upon which depends the healthy condition of all the animal functions.

The atmosphere of Southport is remarkably free from malarious influences; epidemics rarely occur, and when they do, they are seldom malignant unless when imported from large towns. It exerts upon visitors a sedative and composing influence. In some temperaments, for the first few days, it induces diarrhoea, in others the opposite condition.

It is proper to remark here, that notwithstanding the truth of the above statement as to the dryness of the air, it is not so excessive as to be irritating to the skin or mucous surfaces. Such a condition would be nearly as injurious as the opposite extreme of excessive humidity. Even during the prevalence of the east and north east winds, those most unpopular of the subjects of Boreas, the irritative effect is not greater than is found in other localities, much less indeed than on the east coast of England, whilst the prevailing westerly winds come

softened by the vast expanse of the ocean. It is not easy to account for this stopping short of the extreme of dryness, but I am at liberty to state that in the opinion of my friend Dr. Formby, whose knowledge of this part of the coast is beyond that of any other physician, it is in some way connected with Martin Mere, Halsall Mere, and the other meres which chiefly lie to the east of Southport, and appear to temper and soften the atmosphere in their neighbourhood.

The absence of fogs in a place situated on the sea coast is somewhat remarkable. And yet such is the case to a singular extent. So general is the opinion of the original inhabitants on this point, that in order to account for the appearance of a fog occasionally during the last few years, they resort to the amusing explanation that they are in some way connected with the arrival among them of so many families from Manchester and Liverpool—an explanation which, however quaintly put, has this modicum of truth in it, that the increased number of houses has diminished the radiating surface of sand, upon which the general absence of fog no doubt in some measure depends. The only explanation I can suggest is that the sea fog is divided before it reaches this deeply indented coast, and is drawn up the channels of the Mersey and the Ribble, leaving the bay in which Southport is situated clear. The traveller to Liverpool will frequently enter a fog at Formby or Crosby, which accompanies him to town, leaving his home in Southport perfectly clear from anything of the kind. The character of the soil will account for the rarity of land fogs.

In the absence of extensive meteorological data, there is one mode of determining the curative influence of climate of not

less importance, and which has been too much overlooked, to which we must briefly allude; that is, the effect of any given climate upon the health of the native population. It is evident that much may be learnt upon this point by ascertaining the nature and amount of disease which prevails in a locality, and the proportionate number of its cases of longevity, as compared with other places. By observing the peculiar nature of the climate, and its influence upon the stationary inhabitants, we are led to discriminate also in the choice of cases of disease likely to be benefited by being sent to such locality. If, in any climate, we find that its agency is decidedly of a relaxing kind, and that it proximately acts by modifying the tone of organs, we would, *a priori*, infer that such a climate would be unsuitable to that kind of diseased action, depending upon general want of tone and a low state of functional energy. But again, if in any climate we find that acute inflammatory affections—for instance, of the mucous membranes of the air passages—are a common disease with the natives, it would not seem to be a wise or logical proceeding on the part of a physician, to send to such a climate a stranger who was likely to be affected by these very maladies. Now if these principles are applied to the case of Southport, we believe that everything advanced in favour of its climate will meet with the fullest confirmation. That the climate is at once bracing and sedative, may be gathered from the physical and moral history of its native population. If we take as a type of these, the fishermen, we find them broad and fleshy in their frames, phlegmatic in temperament, slow in their movements, and (though this must be attributed to something better even than a good climate) remarkably

decorous and staid in their conduct. With reference to the number of cases of longevity amongst the natives, it is unnecessary to dwell upon the fact, since it is generally admitted, and, indeed, is capable of easy proof.

The rapid rise of Southport from its original insignificant position to its present elevated rank among English watering places, speaks more for it than any panegyric, however laboured or elegantly expressed. That a place which but a few years ago was little else than a knot of fishermen's huts, should in so short a period of time exhibit such an amazing change, is indeed wonderful, and can only be explained by the advantages of its situation, the convenience and safety of its bay for bathing, sailing, &c., and by the healthful bracing atmosphere that surrounds it.

In respect to its shore, the sea water is quite pure, the sands under foot are soft, yet firm, and entirely free from obstruction ; the declivity is so gradual as to be almost imperceptible, a great desideratum to the weak and fearful, and especially in the case of children. The bay is so well sheltered by nature, that it is very rarely such weather occurs as to prevent bathing ; in many places there are long interruptions to bathing from the turbulence of the sea, to the great disappointment, loss of time, and expense of those to whom such delays may be both annoying and injurious.

The above natural advantages have been much increased by art. The village, now rapidly acquiring the dimensions of a fair sized town, is planned with much taste, many of the buildings being of a superior class and possessing architectural beauty. The streets are long, wide, and well constructed ; they are arranged at right angles, thus facilitating ventilation,

light, and cleanliness. The majority of them, by directly communicating with the shore, afford a free passage to the wholesome sea-breeze. It is now under contemplation to extend the sewerage and adapt it to the increasing requirements of the place.

In concluding this chapter I will quote the picture of an imaginary climate for the consumptive, as drawn by the eminent physiologist, Dr. Richardson, leaving such readers as are acquainted with Southport to judge how far it meets the case. Certainly it fails in regard to enticing scenery, but that can hardly be considered an essential :—

“I shall recommend no particular place as a resort for consumptives, for I wish not to enter into disputation on this point. But here is the formula for an hypothetical consumptive Atlantis. It should be near the sea-coast, and sheltered from northerly winds; the soil should be dry; the drinking water pure; the mean temperature about 60°, with a range of not more than ten or fifteen degrees on either side. It is not easy to fix any degree of humidity; but extremes of dryness or of moisture are alike injurious. It is of importance in selecting a locality that the scenery should be enticing, so that the patient may be the more encouraged to spend his time out of doors, in walking or riding exercise; and a town where the residences are isolated and scattered about, and where drainage and cleanliness are attended to, is much preferable to one where the houses are closely packed, however small its population may be.”

CHAPTER III.

EFFECT OF THE CLIMATE UPON DISEASE.

GENERAL CLAIMS AS A SANATORIUM.

WHEN we consider the physical results of a change of residence from a humid atmosphere to a mild dry one ;—that such a change promotes the equable distribution of the circulating fluids over the whole system, increases the activity of the capillaries of the surface, and in the same proportion diminishes the congestion of internal organs ; that the continued action of a bland atmosphere upon the delicate surfaces of the respiratory tubes, lessens irritation and assists in the more efficient production of those changes of the blood so essential to health ;—we shall see sufficient reasons to account for its importance as a means of recovery in various forms of illness.

Nor can we omit to recognise the incidental advantages which attach to such a step. The hope engendered by a new movement taken towards recovery ; the cessation of business cares and anxieties, novel scenery, new associations, and the other incidents attendant upon a change of residence,—all these circumstances have a powerful effect upon the weakened

frame. And when the locality chosen is appropriate to the particular ailment under which the patient actually labours, or with which he is threatened, and especially when the measure has been taken in an early stage of the complaint, the result is often of the most valuable kind, and justifies all that has been said by those who place change of air among the foremost of our remedial agents.

The diseases in which change of climate is most expedient, are chronic bronchitis, asthma, emphysema, strumous diseases, consumption, chronic rheumatism, chronic dyspepsia, ulceration of the fauces, clergyman's sore throat, &c., and to these complaints the climate of Southport is especially adapted. The advantages of a prolonged residence on this part of the coast, in connection with the more immediate treatment of disease, are such as arise from its marine position, and from the constant operation of its peculiar local climate.

The most direct and certain remedy in many chronic complaints, is the habitual breathing of an air containing a maximum amount of oxygen. The proportion of the constituents of atmospheric air remain the same on the highest mountain as in the deepest vale, the principal difference being the amount of carbonic acid mixed with it in different localities.

Owing to the presence of the superincumbent atmosphere, air increases in density the nearer we approach the level of the sea, and it is evident that we inhale at every breath a greater amount of air, and, consequently, a greater amount of oxygen, than at a few hundred feet higher. One great secret of the cure of chronic cases at the sea side, therefore, is the being able, without extra exertion or effort, to receive into the lungs an additional amount of oxygen. The effect of this is to

rouse and sustain the nervous system, and to expedite and perfect the aëration of the blood in the lungs, by means of the more rapid combustion of carbon, thus creating a greater demand for nourishment, as shown by the vigorous appetite which so generally follows a removal to the sea side. The same principle is called into operation by the hydropathist, who must have hills to climb or he gets little or no result. The exertion requisite for ascending a hill necessitates an accelerated circulation, which gives the increased amount of oxygen to the blood. It is obvious, however, that many cases of disease do not admit of such exertion, and there is an absolute necessity for exercise upon the level ground.

As might be expected from what has been already stated, the climate of Southport is peculiarly adapted to the prevention or relief of consumption. In the earlier stages, particularly, before tubercles have actually formed, its effects are often most surprising. As this is essentially a blood disease, and as the sea air is one of the most efficient agents in the improvement of the vital fluid, the prolonged residence of young persons threatened with this fearful malady, has in numerous instances perfectly re-established their health; or in the case of those who possess an hereditary tendency to the disease, has postponed the accession of fatal illness. When the lung has been more or less affected by tubercular deposit, the favourable conditions found in this climate have often, with very little medical interference, arrested the progress of the mischief, and, by giving every advantage to the great restorer, Nature, there have resulted the loss of cough, the diminution of expectoration, the gaining of flesh, and the return of bodily and mental strength.

The same results are found to take place in many cases of chronic bronchitis, attended with excessive secretion and exalted sensibility of the pulmonary mucous membrane. The relief in these cases, from a change from a cold and moist to a mild and dry climate, especially when aided by a judicious use of some of the preparations of iron, is, perhaps, more marked, because often more rapid than in any other morbid condition. It may be stated, in general terms, that the same external circumstances that prove advantageous in consumption, are of equal value in this complaint also.

I have witnessed the most beneficial results, also, in emphysema of the lungs; the tonic and sedative effects of the atmosphere, which exerts a favourable influence upon the air passages, reducing the secretion, improving the breathing, restoring sleep,—and, these ends attained, the general health gradually and surely improves.

In internal congestions, particularly pulmonary, in heart diseases, asthma, and indeed whenever there is imperfect circulation of the blood, or difficulty of breathing, the extreme *purity* of the air is found to add greatly to the comfort of the invalid, and where the disease is of short standing, and circumstances are favourable, this locality is highly conducive to a cure. In the aged, in whom there is reason to believe that structural change has already taken place, disease has apparently stood still for years, and a degree of comfort has been experienced to which the patient has long been a stranger, while living on a clay soil, or in the neighbourhood of copious vegetation.

In chronic rheumatism, and general or partial paralysis, the recovery is frequently very remarkable. That it should

be so in the former case will be understood when we remember the dryness of the atmosphere, and the injurious effects of damp upon the sufferers from rheumatism. The relief of paralysis is probably due, not only to the improvement of the general health, but to the relief of pressure upon the nervous centres, arising from a light and pure atmosphere. The importance of so pure an atmosphere, possessing such physical peculiarities, in diseases of a more general nature, is sufficiently obvious. The unwholesome conditions to which the dwellers in pent-up cities and unhealthy districts are habitually exposed, lead to the production of a low tone of the general health, and proclivity to disease, which disable them from resisting any prevailing cause of epidemics. The comparative freedom from epidemics hitherto enjoyed by the inhabitants of Southport, affords the best illustration of the converse of this truth.

The climate of this place, in conjunction with sea-bathing, has a peculiarly beneficial effect, in certain forms of cutaneous affections, which are extremely distressing to the patient, and are often among the least satisfactory cases with which the physician has to deal. Among these may be mentioned acne, psoriasis, lepra, and troublesome chronic eczema. The capillary vessels partake of the improved tone communicated to the system at large, while the sub-acute inflammation of the skin is at once soothed and subdued by the application of the sea water.

Of the large class of cases of disease which are comprised under the general term of scrofula, a lengthened residence by the sea side is acknowledged to be by far the most important means of cure. The number of young children with feeble,

rickety frames, ulcerating glandular enlargements, and drooping pallid countenances, is lamentably large. The local complaints under which they suffer, are only the symptoms of constitutional degeneration, which requires the long-continued employment of constitutional measures for its removal or improvement. A marine atmosphere, sea-bathing, warm clothing, nourishing diet, and other hygienic measures are the essential remedies. The special advantages which Southport offers in these cases, over other sea side resorts, are the dryness of its atmosphere and its walks, the safety of its sea-bathing, and the unfailing occupation which children find in digging in the sand.

It might be supposed that the advantages of a sea side residence, as well as the other special local advantages offered by Southport, were of little importance in diseases of the stomach and bowels, and in affections of the digestive organs generally. Such a supposition, however, would be erroneous. Many forms of dyspepsia are greatly relieved by a change from a raw cold climate to a warmer locality, in conjunction with the utmost attention to diet, and regular exercise either on horseback or on foot. In those cases of dyspepsia, particularly, where the mucous membrane of the stomach is irritable, the improvement is very marked. The same may be said of similar states of the intestinal membrane, in chronic diarrhoea. It would be impossible to particularise the affections of the liver and other organs which have been benefited by this climate, or which, at all events, have seemed to owe their cure to a long continuance of its influence. As one instance out of many, I present the reader with the following case, which is not only interesting in itself, but has additional value from

being the personal experience of a medical man, whose judgment must necessarily be better than one unacquainted with the nature of disease.

"J. P. S., *ætat* 30; form, spare and delicate; temperament, nervo-bilious; habits, temperate; has undergone much mental and physical labour; riding or driving long distances, daily, in the exercise of professional duties; much night work. Early in the year 1851, began to experience violent intermittent pain in the epigastrium; sometimes simulating heart-burn, more frequently of a dull boring character, generally limited to one spot, and attended with sense of weight and oppression,—relieved temporarily by warm food or drinks. Pyrosis sometimes preceded the pain, but frequently seemed to result from it; affording, however, no mitigation to the symptoms. Appetite not much affected in the absence of the pain, which did not come on at any stated period before or after meals. Bowels variable, alternately loose and constipated; much flatulence, frequent eructations of sulphuretted hydrogen. Tongue clean; indented at the side; cracked transversely, papillæ prominent. Pulse generally regular but feeble, not affected in frequency during the paroxysms; nights disturbed and restless. At this period of my ailment, which was conceived to be *Gastrodynia*, from mal-assimilation, I resorted to alkalies, combined with bitters, afterwards bismuth and hydrocyanic acid. The attack generally came on and disappeared without apparent cause; during the remission of the pain I speedily regained flesh and strength. It generally recurred every five or six weeks, and lasted several days. In 1853, after a succession of attacks of variable severity and duration, I became much worse. The intermissions were

shorter; the pain much aggravated in intensity—sometimes occupying a space intermediate between the umbilical and epigastric regions, and conveying the sensation of an intensely acrid fluid, acting upon a raw, abraded surface, which a florin might cover. At other times it was much diffused, extending to the right hypochondrium and dorsum of the back, assuming a character which baffles description. Much distension and flatulency accompanied it, and sounds similar to the rolling or dropping of fluid were often heard by myself and attendants, especially when I assumed the recumbent position. It was generally worse in the night, my sufferings frequently obliging me to pace my room or rise up suddenly in bed in restless agony, my hands pressed upon or rubbing my stomach; the peristaltic movements of the latter being often visible, especially during violent paroxysms. Appetite variable and capricious; nausea seldom absent; food when taken often aggravating the pain; Pyrosis now more frequent, and succeeded by vomiting of yeast-like fluid in very large quantities, very acid and effervescent, sometimes boiling over the receptacle. Urine alkaline, larger in quantity during the paroxysms, generally pale and of low specific gravity. Great mental and physical prostration; countenance pinched and anxious. During the latter period, I availed myself of the opinions and advice of several medical friends, and, at their suggestion employed, at different stages of my disease, (now pronounced to be ulceration of the stomach, in conjunction with *sarcinæ ventriculi*,) the following remedies: local depletion, counter-irritation, nitre, muriatic acid, quinine, oxyde of silver, creosote, and more recently cod liver oil, and hyposulphite of soda. The former I could not persevere in, as it kept up a constant nausea. At times, I imagined the latter

reduced the quantity of fluid vomited, and arrested the fermentation; it had, however, no effect upon the pain; indeed, I often found it necessary to encourage vomiting to relieve the latter, and the more perfectly I succeeded, the more permanent was my relief. At this stage, alkalies induced pyrosis and aggravated the pain.

In October, 1854, during an interval of moderate health, I was called out several nights successively. To this circumstance, and exposure to cold, was attributed an attack of peritonitis which followed and confined me to my room for five weeks. Under the ordinary treatment, with the early use of stimulants, I recovered slowly and unexpectedly. From this time my stomach symptoms progressed in severity, and I became utterly wretched from their continuance. Pain and vomiting were now almost constant, excessive prostration and debility ensued, and the attacks at length confined me to bed five days out of the seven. My own impression and that of my medical friends was, that I was the subject of some obscure organic disease implicating the liver. Despairing of relief from other measures, I now resorted largely to opiates, alone or combined with magnesia and compound kino powder, with temporary alleviation to my sufferings. Throughout my illness, I was scrupulously careful in my diet. In August, 1856, in consequence of increased pain and debility, I was obliged to relinquish my practice, and came down to Southport, while the removal of my family was accomplished. I now felt excessive languor and sense of serious illness impending. Opiates, latterly, merely subdued the pain sufficiently to make it endurable, and although there was no apparent swelling externally, I experienced a feeling of extreme fulness and

distension, continuous nausea, and repeated vomiting. The vomited matter now assuming a dark tinge; this change I at first ascribed to some black current jelly I had taken. On the day following, however, (August 8th,) whilst conversing with a medical friend, I was seized with vomiting, to the amount (as I was afterwards informed) of several quarts; the fluid being dark, and porter-like. Small quantities passed also by the bowels. I was now quite blanched, and for some time in a hopeless, insensible state, and was only restored by the presence of mind and anxious exertions of my friend, who administered brandy repeatedly, applying mustard cataplasms to the heart and extremities. On the second day, turpentine and ammonia were prescribed, followed by quinine and nitro-muriatic acid, with alteratives and anodyne. I returned home in November, feeling better than I had done for several years, and quite hopeful that the crisis of my sufferings had passed. In about a month, however, after my return, I began to experience the sad forewarnings of a relapse, and from that period to July, 1857, during which I had lived in perfect retirement, I underwent a series of attacks similar to those above related. Having formerly experienced much benefit from visiting Southport, I decided, as a "dernier resort" to reside there; removed late in July, scarcely able to travel from excessive debility. My sufferings still continued without abatement up to December, when after a fortnight's intense pain, which opium, belladonna, and chloroform failed to relieve, diarrhoea came on, the evacuations being similar in character to the fluid vomited in August, 1856. Under watchful care and judicious treatment I again recovered. From this time my health steadily improved, and I now enjoy entire

freedom from pain of any description. My own conviction is, that had I removed to Southport earlier, my sufferings would have been much curtailed."

The above case is one of a numerous class, in which the beneficial effects of a suitable climate are recognised, without the mode of its operation being very apparent. No particular necessity would seem to have existed from the nature of the case, either for a dry or a saline atmosphere. The country district from which the patient came was not an unhealthy one, and the purity of the air of Southport could not have been the sole cause of the beneficial result. In such instances we must be content to rest upon the fact without being able to explain its rationale.

The forms of dyspepsia which seem to derive most benefit from the climate of Southport, are those which present the following symptoms : Digestion is slow and painful, accompanied by a sense of uneasiness at the pit of the stomach, a feeling of weight, and frequently severe pain coming on after a meal. This commences from a quarter of an hour to three hours after taking food, and is often attended with heartburn. There is also much flatulence, the gas emitted having the odour of sulphuretted hydrogen, or, more commonly, communicating a sour taste to the mouth ; constipation is habitual ; the appetite lost or diminished ; the tongue little altered in appearance ; great sensibility to pressure over the stomach, sometimes limited to a very small space. With these local symptoms, we find an enfeebled and languid condition of all the functions, a pale countenance, the body emaciated, the extremities cold, the skin harsh and dry ; the intellectual faculties impaired, and the muscular force diminished, so

that mental and bodily exertion are equally difficult. Such are the symptoms which are continually presenting themselves, and which seldom fail of relief, if, during his residence, the patient will pay a moderate attention to his diet, exercise, clothing, &c., and to those general sanitary rules which have been a thousand times repeated, and therefore need no further reiteration in these pages.

I would here give a few words of caution, with particular reference to those who suffer from affections of the throat and chest. Although, as has been said, there are few days in which an invalid cannot contrive to get walking exercise, it must be mentioned that the changes of temperature during the same day are frequently very considerable. It is needful, therefore, carefully to avoid going out either too early or too late in the day. During certain portions of the winter, there are not more than two or three hours intervening between the chills of morning and of evening, and this interval should be chosen for out of door exercise. It is also desirable, indeed, absolutely necessary, in more serious cases, that the patient should keep his rooms at an equable temperature, say of about 65°, and this should be done both by day and by night. The great and sudden change from a warm sitting-room to a cold bed-room, is continually frustrating the best contrived attempts to bring about a cure.

CHAPTER IV.

SUGGESTIONS FOR INVALIDS.

IN the outset of some remarks I propose to offer to those who have left their homes in pursuit of health, it is necessary to dwell somewhat at large upon the importance of maintaining a hopeful state of mind. Though it is said,

“Hope springs eternal in the human breast,”

it is not easy to cherish and retain that feeling under circumstances of declining strength, of long continued or oft returning pain, and isolation from all the habits and excitements of accustomed duties. The nervous depression which chronic illness naturally induces, often leads an invalid to take a more gloomy view of his condition than the facts will justify. Of course there are cases where a reasonable hope of recovery can no longer be entertained; and in all cases of protracted illness, it is the duty of a Christian to prepare for the most solemn issue, that it may be also the most welcome and most blessed. But there are special reasons, derived from the inherent powers of the system and amply confirmed by experience, which afford sufficient ground for a chastened hope, even in circumstances of undoubted gravity. The chief illustrations I

shall adduce, are taken from one of the most formidable complaints which afflict humanity—Consumption. Pathological facts show that recovery from Consumption may take place in all its stages, whether the disease is in the form of small tubercles sprinkled through the lung, when it is aggregated in masses, and even when, by softening, a cavity of greater or less extent has been formed. There is conclusive evidence that tubercle does occasionally become absorbed.' Moreover, the cavities may be healed by cicatrisation; by contraction with calcareous or chalky concretions; or by the formation of a thick fibro-cellular lining membrane, the cavity remaining, though harmless.

These evidences of the fact of recovery in Consumption, are found in cases where death has occurred from other diseases; but we have equally valid testimony during the life of some who have been its subjects. There are many who have presented all the rational signs or symptoms of Consumptive disease, and every year adds to the number. Some have recovered from the first stage, and, doubtless, many more such might be recorded, if the nature of the complaint were better appreciated by the public, and earlier attention paid to declining health, previous to the appearance of special chest symptoms. In the second stage, the recovery has been equally conclusive, and the physical signs have been reduced to mere roughness of the respiratory sounds with prolonged expiration. In another case, where there was spitting of blood and a cavity in the lung, there was recovery of the general health and removal of the cavity. In another, in the third stage, the cavity remained open, but contracted, and the health was restored. In another case, where there were evidences of extensive

disease and cavity, similar improvement took place in the system at large, and almost all signs, previously recognised by the stethoscope, were removed. Many cases where the disease has been arrested, are on record.

It must not be supposed that these successful attempts of nature to check the progress of this formidable complaint, are of very rare occurrence. Dr. Williams states that he found phthisical lesions in the lungs of half the adults beyond the age of forty that he had examined, showing that many escape the disease notwithstanding its seeds are in their frames. Professor J. H. Bennett found concretions and puckerings of the lungs in twenty-eight out of seventy-three bodies. Rogée states, that of one hundred aged persons who died at the Salpêtrière, fifty-one had concretions and other traces of tubercular disease of the lungs. In five of the cases he found cicatrices of cavities which had healed; and he states, that in the course of a single year, he had been able to collect ten or twelve incontrovertible examples of the same kind. Nor is this fortunate issue confined of necessity to cases in which the disease has been of very limited extent; for Dr. Bennett has recorded the case of a man who, at the age of twenty-two, laboured under all the symptoms of deep decline, but recovered, and died at the age of fifty of an affection of the brain. The upper portions of both lungs contained cretaceous tubercles, and were puckered, and the cicatrix at the summit of the right lung, was from a quarter to three fourths of an inch in breadth, and three inches in length. When we remember the tendency which all cicatrices have to contract, it will be evident that one of this kind must have resulted from a cavity of very considerable size.

If these things be so, and we are entitled to entertain a reasonable share of hope even in the case of so formidable a disease as Consumption, with how much greater propriety may this be done in most other complaints? In a former part of this little work, a case has been given of recovery from serious disease of the digestive organs, and it would be easy to enumerate instances in which other portions of the body were involved. Advanced life, in connection with disease, affords less ground for hope; but in early and middle life, we do well to have faith in the reparative powers of nature, assisted by the resources of art, especially when the system has not been undermined by a previous career of debilitating excesses. As an instance of the life-protracting influence of modern therapeutic agents, we may mention that Dr. J. B. Williams (than whom no man is better qualified to speak on the point, and who draws his inference from 9000 cases,) has recently asserted, that the average duration of consumption, formerly estimated at two years, may under improved treatment by cod-liver oil, be fixed at four years.

Few things are of more importance in the management of chronic disease, than that a rational and well-considered plan of treatment should be pursued with perseverance, and for a sufficiently lengthened period. And yet the anxieties of the invalid frequently lead him to err on this point. Not reflecting that his present condition has been the result of a long continued divergence from the standard of health, in some one or more of the functions or organs, before there resulted what forms his actual disease—he forgets, or does not understand, that the healing powers of nature, however encouraged and aided by art, when they have really begun to remedy the evil

can only return to the healthy condition at a similar pace. He lays himself open, consequently, to every promising offer of a royal road to recovery. Systems surround him on every side, promising the speedy fulfilment of his most ardent wishes, its claims endorsed by this and that enthusiastic friend. Comparisons are made between his case and others, based upon the slightest resemblances, and without even the attempt to ascertain how far those resemblances are real or only apparent.

The mingling of truth with falsehood which we find in medical heresies, is the real source of their success. A system of pure error could not exist for a day. But when a portion of truth is recognised in an otherwise false system, it conceals its real nature as a whole, owing to the difficulty of discriminating in matters so alien to an invalid's ordinary pursuits. But it must be admitted that the present state of medical heresies is to some extent a legacy from the former system of medical practice, and which we are afraid has still its adherents. We see at present a state of things which cannot, we sincerely believe, be altogether accounted for by the weakness and credulity of the public; we cannot but attribute something to the mystery and excessive medication of former times. The public were greatly to blame for the mystery, since they persisted in attributing a power to the medical man beyond all reason; they were to blame in leading to an undue use of medicine, since they supposed that in that alone consisted his power to do them good; and if one declined to prescribe for them, they went to another. But still the profession were consenting parties. There was a want of confidence in the force of truth, when urged with simple earnestness. Had the profession been sufficiently alive to the danger of

re-action in the public mind; had they calculated upon the growing intelligence of society; had they sacrificed their immediate interests to the permanent welfare of the profession, they would have prevented the present discreditable state of things. We are not now speaking of vulgar quackery: that must always exist while the masses are ignorant and unreflecting, and thus exposed to become the prey of designing men. We allude to those fashionable systems which are followed by so many otherwise thoughtful and intelligent men and women, who are not to be led astray by mere credulity, but require some one guiding principle, of which they must be convinced. This has been with many the conviction that the former practice of over-drugging with medicine was wrong. Satisfied of this fact, they have dwelt upon the discovered truth so long, as to have little thought to expend upon the foundations of the system they have adopted. They know themselves to be right on one point of the enquiry, and they too lightly assume the correctness of the rest. Tired of so much physic, they fix upon water, a remedial agent of good repute, and erect a temple of health in which she is the exclusive goddess. As hydropaths, they can, at least theoretically, get rid of the drugs they so much detest. Or, if unprepared absolutely and ostensibly to "throw physic to the dogs," they tamper with their reason so far as to substitute a semblance for a reality, and, having minutely subdivided the "dummy," swallow it with the greatest possible gravity. Prove to them, if they will listen,—which they will seldom consent to do,—that their fundamental principle is a falsehood; remind them that, for the production of every positive effect, there is required an exactly adequate cause; show them that their great conclusive arguments, their

reputed cures, are but prime examples of the logic of *post hoc*, *ergo propter hoc*, and that the same syllogism would equally establish all the competing systems of quackery that now exist, or have ever existed; do all this, and more, yet they fall back upon their first strong conviction, and behind that entrenchment stand, till events prove to them the fallacy into which a partial truth has led them.

There is one point, not bearing exclusively upon the condition of the actual invalid, but of more general interest, to which I must allude,—that is the subject of prophylactic medicine, or that department which has reference to the prevention of disease. That this department should have received so little attention, is indeed surprising. It is a popular saying, that "prevention is better than cure;" but both patients and physicians have been content to leave the matter in its proverbial form, so far as any systematic carrying out of the principle is concerned. Very scanty notices of this subject are to be found, and those very widely dispersed, in medical writings. It is so much the custom virtually to limit the duty of the physician to the cure of disease, that this noble sphere for the exercise of his skill and ingenuity is practically ignored. And yet it is probable that, in a large proportion of those who die of chronic disease, the seeds of such disease have been implanted by the time they have attained their fortieth year. Would it not be wiser to make the first rudimentary appearance of anything in the shape of local or general derangement into a *casus belli*, the ground of a regular attack, rather than to wait till offensive hostilities appear in the form of painful symptoms? An unwonted sensation, or a marked change of function, amounting in neither case to positive

inconvenience or distress, may, nevertheless, be significant of approaching ill, since we know that here also "coming events cast their shadows before." It is reasonable to suppose that suitable antidotal means might often be devised, based upon the physiological changes going on, to prevent those structural alterations which are sure to follow abnormal action long continued. This, however, can only be called prophylactic in an accommodated sense; but we would go further, and urge the necessity of a true prophylaxis. The transmission of hereditary tendencies to disease is of constant occurrence; individual peculiarities are often attended by a proclivity towards certain forms of physical derangement; a misguided early training may have warped the frame in an evil direction; certain employments or modes of life lead without fail to injurious, but well known, results. All these, and many others that might be mentioned, are instances in which a careful system of preventative measures, not taken up and applied intermittingly, but dovetailed, so to speak, into the economy of life, would seem to be the dictate of true wisdom. We are so much in the habit of thinking that men must die of disease, that a healthful old age is looked upon as something remarkable, something for the attainment of which no special effort can be made. No legitimate object of human desire can fail of at least partial accomplishment, where proper means are properly brought to bear upon it; and yet few would be found to contend either that a healthy longevity is not such a legitimate object, or that it is not generally left to the merest hap-hazard.

No better instance can be given of what a due attention to prophylactic means can accomplish, than the case so well described by Dr. Watson, in his admirable Lectures on the

Principles and Practice of Physic : "The late Dr. Gregory, of Edinburgh, used always to mention in his lectures the case of Dr. Adam Ferguson, the celebrated historian, as affording one of the strongest illustrations he ever met with, of the benefit that may be derived from timely attention to the avoidance of those circumstances which tend to produce plethora and apoplexy. It is, perhaps, the most striking case of the kind on record. Dr. Ferguson experienced several attacks of temporary blindness some time before he had a stroke of palsy, and he did not take these hints so readily as he should have done. He observed, that while he was delivering a lecture to his class, the papers before him would disappear—vanish from his sight, and appear again in a few seconds. He was a man of full habit, at one time corpulent and very ruddy; and though by no means intemperate, he lived fully. I say, he did not attend to these admonitions, and at length, in the sixtieth year of his age, he suffered a decided shock of paralysis. He recovered, however, and from that period, under the advice of his friend, Dr. Black, became a strict Pythagorean in his diet, eating nothing but vegetables, and drinking only water or milk. He got rid of every paralytic symptom, became even robust and muscular for a man of his time of life, and died in full possession of his mental faculties at the advanced age of ninety-three, upwards of thirty years after his first attack." Sir Walter Scott describes him as having been, "long after his eightieth year, one of the most striking old men it was possible to look at. His firm step, and ruddy cheek, contrasted agreeably and unexpectedly with his silver locks; and the dress he wore, much resembling that of the Flemish peasant, gave an air of peculiarity to his whole figure. In his conversation, the

mixture of original thinking with high moral feeling and extensive learning, his love of country, contempt of luxury, and especially the strong subjection of his passions and feelings to the dominion of his reason, made him, perhaps, the most striking example of the Stoic philosopher which could be seen in modern days."

But immoral indulgence of the passions and appetites, and the more obvious infractions of the physical laws, with the neglect of wise precautionary measures, are not the only points upon which it is needful to take warning. The intellectual and emotional nature of man is subject to laws quite as stringent as those which regulate his bodily functions. The injurious influence of mental excess is not less positive than that of physical, though not so obvious. It may be difficult to persuade the busy man on 'Change that the growing dyspeptic symptoms which trouble him are the direct result of the state of turmoil to which his brain has been exposed for months and years together; and yet the fact is certain. The student of law or divinity who strains his faculties to the utmost, without allowing them the repose necessary for their recruitment, is not only sinning against his own body, but is adopting the best plan to thwart his own cherished objects. The popular minister, whose whole soul is in his work, and who is compelled to keep his intellectual powers on full stretch to meet the requirements of his position, while his life is passed in a succession of nervous excitements, exposed to alternations of heated rooms and cold night air, is undoubtedly doing a great work, but he does it at a great cost. He will hardly live to build up the Church by his matured wisdom, or exhibit the passive virtues of the aged Christian. The list of highly

gifted ministers of various Churches who have been lost to mankind when in the full vigour of their intellectual and moral strength, by a systematic neglect of the most ordinary sanitary rules, is sad to contemplate. The subject is one of great delicacy, and I would only further suggest that the moral government of God is perfectly harmonious in all its parts, and that the fulfilment of a duty in one direction never necessitates opposition to the Divine intention in another.

Intellectual labour, pursued in the quiet of the study, if too long continued, and not sufficiently alternated with outdoor exercise, is fertile of ill effects. The maladies thus induced are extremely varied, and not seldom are attributed to any cause but the right one. They may take the form of a direct injury to the over-worked organ, the brain, and may proceed onward along the parallel lines which lead respectively to insanity or paralysis. But more generally they will assume one of the Protean forms of dyspepsia, and lead to impaired nutrition or structural change. Sydenham considered that one of the most severe fits of gout he ever experienced, arose from great mental labour in composing his treatise on that disease; and the student of literary history will call to mind many instances, where the completion of some intellectual masterpiece has been speedily followed by the death of the master. The late gifted Hugh Miller is one of the many instances of this fact. It is to be lamented, that those who "intermeddle with all knowledge," and who are the appointed instructors of mankind, should so often neglect that knowledge with which their own mental and physical comfort is closely connected, and the acquisition of which would multiply their capabilities of usefulness to the race.

If prophylactic measures have an important bearing upon the subject of the prolongation of life, not less important is the proper treatment of advancing age. Although an individual may escape destruction from causes that are accidental and extraneous, he nevertheless bears about him natural and internal causes of decay, inevitable in their progress, and leading to one certain result. With the germs of life are intermixed the seeds of death; and, however vigorous the growth of his bodily frame, however energetic the endowments of its maturity, we know that its days are numbered. To mark the gradual succession of the phenomena which attend these changes is deeply interesting. In youth, all the powers of the system are directed to the building up of the frame, and of the different organs; to their extension, consolidation, and perfection, and to their adaptation to the performance of their several functions. The resources of the system are in excess of its demands, and the body increases in bulk. In course of time, the processes of reparation and decay approach nearer to an equality, and at length are exactly balanced. By a wonderful system of adjustments the balance is kept perfect, often for many years, until, at last, old age steals on by slow and imperceptible degrees. The relative proportions of the fluids and solids are altered, the solid tissues become condensed, muscular substance appears almost changed into tendon, fibrous structures either lose their flexibility and become too rigid for use, or are changed into bone. The smaller arteries are obliterated, and the heart undergoes structural change; functions are feebly performed, the chemical condition of both solids and fluids becomes altered, the skin grows dark and corrugated; and, as the various signs of

decay increase,—the tottering step, the bent form, and the palsied movement,—we perceive that the individual has entered upon that period, when, in the sublime language of Scripture, “the keepers of the house shall tremble, and the strong men shall bow themselves, and the grinders cease because they are few, and those that look out of the windows be darkened, and the doors shall be shut in the streets, when the sound of the grinding is low, and he shall rise up at the voice of the bird, and all the daughters of music shall be brought low; also when they shall be afraid of that which is high, and fears shall be in the way, and the almond tree shall flourish, and the grasshopper shall be a burden, and desire shall fail; because man goeth to his long home, and the mourners go about the streets: or ever the silver cord be loosed, or the golden bowl be broken, or the pitcher be broken at the fountain, or the wheel broken at the cistern. Then shall the dust return to the earth as it was; and the spirit shall return unto God who gave it.”

When and how this descent towards the tomb shall take place, is in the hands of Him who measures out our days, and appoints our outgoings and incomings. Human science is impotent in presence of the general evidences of decay. But where the stress of disease is so localised as to threaten destruction before these marks of decay have become general, she can sometimes relieve that stress; she can suggest the compensations required by altered circumstances; she can endeavour to remove the obstinacy which persists in retaining habits no longer applicable or safe; she can erect barriers against anticipated evils; she can sooth the irritability of weakness, and assuage the violence of pain. At all events,

her ministers can never be more legitimately employed than in the struggle to prolong human life; and their efforts will be more or less effective, in proportion to the attention they may give, not only to actual disease, as it effects the different periods of life, but also to its first incipient manifestations. And it is to this dawning stage of illness, before the evil has attained any considerable power, that we would draw the attention of those whom it concerns. We would advise that practical effect be given to the maxim—"prevention is better than cure."

CHAPTER V.

ON SEA BATHING.

The importance of bathing as a hygienic and therapeutic agent has been recognised by all nations, at all periods of history; its practice existed as well amongst nations basking under the heat of a tropical sun, as amongst the hardy inhabitants of the unthawed regions of the north. By the former it was employed as a religious observance or a mode of luxury, by the latter with a view to health, or to counteract the effects of intense cold.

The histories of Greece and Rome furnish abundant evidence of the extent to which bathing was practised by these nations. So fascinating to them was the luxury of the bath that it was customary to employ it at their festive entertainments, and it was considered essential to the *ecldt* of public rejoicings. Establishments for this purpose were constructed, vying with each other in magnitude and splendour, as may be seen from the ruins which still excite the wonder and admiration of the traveller.

The importance of bathing cannot be overrated if we consider that the skin upon which it operates performs the several functions of absorption, secretion, and excretion, and that upon

its surface the bloodvessels and nerves terminate. It has also a wide range of sympathies, in which are included the alimentary canal and air passages, and it co-operates also with those great emunctories of the circulating system, the lungs, the liver, and kidneys, aiding them in the elimination of noxious matters. Hence the absolute necessity that there should be no impediment to the performance of its functions.

Sea-bathing has many advantages over ordinary bathing. The sea may be considered practically as a medicated bath, containing, besides well-known saline constituents, iodine and bromine in minute proportions, which latter exert a peculiar action upon the glandular and absorbent system. The sea is also the habitation of innumerable organic beings, who live and die there; it therefore becomes impregnated with subtle and volatile animal particles, which extraordinarily increase the stimulating powers of sea water. We conclude, therefore, that open sea-bathing, where it can be borne by the invalid, is preferable, as in home or in-door bathing, although all the elements of sea water may be present, there is still the absence of a saline atmosphere, of the shock of the waves, the agitation of the water, and the electric and magnetic currents which are evolved, and exert a stimulating effect upon the system. It will be well to enlarge a little on these topics.

Sea-bathing on the British coasts (for its action is very different in the tropical waters of a warm climate) owes its efficiency to the combined influences of *cold*, of the *saline particles*, which enter into the composition of sea water, and of the *shock* produced by the impulsion of the waves. In order to understand its effects we must endeavour to form a just estimate of the power of each one of these agents separately.

The first impression produced by the cool temperature of the sea, which even in summer rarely exceeds 67°, is powerfully to stimulate the numerous sensitive nerves of the skin. As all our organs are under the influence and direction of the nerves, every part of the body must therefore be excited and stimulated by the sea-bath; as when a bell is struck, the vibration extends over every part of the metal. Sea-bathing goes far beyond the mere local action on the skin, its immediate effect being a general stimulation of the whole nervous system. The sudden application of cold to the surface is followed by a shrinking of the skin and contraction of the tissues. As the result of this the capacity of the bloodvessels is diminished, and a portion of their contents suddenly thrown upon the internal organs. Hence follows the participation by the nervous system in this sudden congestion, causing a more energetic action of the heart, and consequent rush back to the surface. This is the state termed *reaction*—the first and final purpose of every form of cold bathing. Reaction is known by the redness of surface, the glow and thrill of comfort and warmth, which follow the bath. By it the internal organs are relieved, respiration is lightened, the heart is made to beat calmly and freely, the mind feels clear, the tone of the muscular system is increased, the appetite is sharpened, and the whole organism feels invigorated.

The stimulating effects of the *saline constituents* in sea water form the second agent acting remedially. These, which constitute about one fifty-fifth part of its weight, produce a powerful stimulant effect upon the skin, and determine a more copious flow of blood to that organ, assisting the primary reaction, and shortening and diminishing its depressing effect. Owing

to these qualities of sea-water, one may bathe in the sea at a lower temperature than in fresh water. Reaction, even in robust constitutions, is much longer in making its appearance after bathing in rivers; but in the sea, even on a calm day, and to a weakened constitution, it is almost instantaneous, and much more powerful. It has been supposed by some that the absorption by the skin of a portion of the saline ingredients may tend to increase these effects.

To illustrate the influence of the third element in a sea bath, viz., the shock produced by the *impulsion of the waves*, we need only refer to the effects of a douche bath to form an adequate idea of the difference experienced between bathing in a calm and in an agitated sea. The shock of the waves in a rough sea is, in fact, an extensive douche bath, which, by striking a great part of the body at once, makes all the more powerful impression upon the economy.

The general result of sea bathing, both on the healthy and invalid subject is to stimulate nutrition and improve the functions of every organ, increasing the vitality of the blood and improving the various secretions of the body. The urine becomes more saturated, the action of the skin is augmented, the liver pours out a greater quantity of bile, and a more active respiration consumes a greater quantity of carbon. In consequence of this increased activity, the system gradually purifies itself of a mass of worn-out particles, which were tolerated so long as the body was in a languid state, but which, under the stimulus of encreased energy, it casts off as an oppressive load. Thus, we see the strengthening process giving rise to an alterative action in the diseased frame; swollen and indurated glands, scrofulous tumours, cutaneous

eruptions, and other morbid deposits, are re-absorbed, and thrown out by the system.

There are certain conditions which require to be attended to, with regard to the differences of strength, constitution, and temperament, in individual cases. The first caution required is not to continue the immersion too long. Even in vigorous subjects, prolonged immersion is very apt to be followed by injurious effects, the danger being greater in proportion to the coldness of the bath. After the first shock on entering the water, a feeling of warmth and a genial glow is perceived; if the bather quits the water before this stage passes away, the whole surface of the body will partake of the sensation; if immersion be prolonged further than this, the blood is driven to the internal organs, the nervous energy is depressed, and reaction being prevented, injurious consequences are liable to ensue.

One of the first of these is weakness of nervous energy, with irregularity of muscular contraction. No doubt most of the accidents that occur in bathing, and are generally referred to a supposed seizure of *cramp*, arise from this cause, viz., the enfeebling effect of undue cold upon vital action. This is perceived in the difficulty of fastening the dress when the hands are chilled. Hence persons of a spare and slender habit of body, even though they be good swimmers, should be cautious of venturing into deep water, especially at an early period of the season, when the water at the surface is no true indication of its temperature beneath. Even when the results of too long an immersion are not so directly injurious, the system suffers from other evidences of defective reaction, such as a sense of chilliness, which continues throughout the day.

Though cold never injures the body when acting as a stimulant, yet, in delicate and convalescent persons, the sensations of the bather must be specially regarded in relation to its mode, duration, and degree. The time occupied in bathing in cold water by invalids, though varying according to individual cases, should not, as a general rule, exceed a few minutes, say from two to ten. Before entering the water, a smart walk should be taken along the shore, so as to produce a comfortable glow, and assist the reaction. Persons in moderate health may remain in the water a longer time, in this respect being governed by their own experience; but they must not omit the use of active exercise, both during and after the bath.

When the bather is suffering from nervous exhaustion from bodily fatigue, when the skin is cold and covered with moisture, or where there has been violent perspiration from the effects of medicine or exercise, the effect is sometimes to overpower the system rather than to rouse it to reaction. Care must also be taken not to allow too long a time to elapse in the preparation for the bath, and particularly not to hesitate too long before plunging into the water. It is in this cold stage that there may be danger, for the excitement has already passed away, and the system cannot resist the depressing influence of the cold. If the surface of the skin be dry, and the heat somewhat above the natural standard, little is to be feared from immersion into a lower temperature.

The next important question is the proper time for bathing. In delicate subjects, injury is frequently caused by cold bathing at a time when the vital powers are too languid to admit of the necessary reaction,—before a meal, or after any great fatigue, for example. The rule for the invalid should be, not to bathe

either just before or just after taking food, nor after too long a walk. A bath early in the morning, before breakfast, exerts a more powerful effect than one taken at a later hour of the day, and requires proportionate energy and strength in the bather. As a general rule, both bathing and exercise, on an empty stomach, will be found unsuited to the invalid, and the best time will be the period between breakfast and dinner, taking care to avoid the other evil of bathing on a full stomach, which is dangerous to persons of full habits, or advanced in years, exposing them to the risk of congestion of the brain or even apoplexy. Two hours after breakfast and three hours after dinner should elapse before the bath is ventured upon.

Too frequent bathing is to be avoided. Bathing, like all other stimulants, depends principally upon its occasional use for its legitimate effects. The evils resulting from too frequent bathing are nearly equal to those resulting from too long immersion. The practice of bathing every day is not to be recommended. For persons of a delicate constitution and reduced habits of body, a bath every third or fourth day is sufficient; after a short period it may be tried every third day.

If the system be very weak and reduced, it is advisable to take a few preparatory warm sea-water baths, having the temperature daily reduced, so as to pave the way for bathing in the open sea. As the good results of sea-bathing depend very materially upon securing the proper amount of reaction, where this is not attainable in the ordinary way, means should be used to bring it about; for this purpose the flesh-brush, or horse-hair gloves, or what is perhaps better still, Walton's metallic flesh-brush, may be used, both before and after the bath,—applying friction more particularly over the

stomach, chest, and back. No doubt the best mode of using the bath is that of quick immersion. As cold bathing has a constant tendency to propel the blood towards the head, it ought to be a rule to wet that part as soon as possible; by due attention to this circumstance, there is reason to believe that violent headaches might often be prevented.

There are many reasons why aged people should bathe with great caution. The tendency to disease of the brain increases as age advances, and it is very important that sudden and violent excitement be avoided; the strictest moderation should be maintained in every kind of mental and physical effort. In youth and manhood the waste resulting from the exercise of mind and body is soon repaired; but after the maturer years of life are passed, a point is reached when what is lost is lost for ever—any attempts to force either mind or body only leads to exhaustion. The warm bath is much more likely to be productive of good results in persons so situated, especially when the system is reduced from disease or over-exertion.

As a general rule, it may be said that wherever organic disease or change of stricture exists, sea-bathing is injurious; debility, either nervous, or muscular, being the type of those diseases in which it proves beneficial. As a practice, the most delicate as well as the most robust may be so trained as to enjoy and receive benefit from it; but there are some constitutions, more than others, which are liable to feel its ill effects. Such are those who are plethoric and of a bilious temperament, whose natural habit of body is to make blood rapidly. Where the venous and arterial systems are in a constant state of distension, sea-bathing would be found too stimulating a remedy, tending to produce a momentary congestion of blood

in some parts of the body, thus producing unequal distribution, and a strain or pressure on certain organs. Of course the above remark applies more particularly to constitutions weakened by disease. Sea-bathing is no doubt enjoyed as much by persons of a full habit and bilious temperament as by others, and as safely, when properly trained to it.

Although the sea-bath is allowed to be useful in local congestion arising from debility and loss of vitality in an organ, yet even in these cases care and attention are required to prevent the weakened organs from becoming permanently injured by the quickened but unequal distribution of blood to the part. Individuals with a feeble action of the heart, or subject to spitting of blood, or in whom a state of active inflammation is present, should be particularly careful to use the bath with moderation, and to take advice before venturing on it.

As preparatory to bathing in the open sea, the warm sea-water bath is universally applicable. By its means invalids may gradually prepare themselves for the more stimulating and invigorating influences of the cold bath, who might not otherwise have been able to withstand the shock. Thus employed, it is better to diminish the temperature of the bath five or six degrees each time, trying the effect of applying cold to the back while immersed in the bath. Persons whose nerves are very irritable and cannot easily bear the shock of the first dip in cold water, and cannot bear the loss of animal heat, should not try the experiment more than once, nor need they relinquish the good to be obtained by bathing. In the graduated scale of the temperate, tepid, and warm bath, a very little attention will enable them to hit the right medium, and they will thus possess a tolerable substitute for the open sea.

In addition to this preparatory use of tepid and tepid seawater bathing, it acts also as a sedative, promoting diaphoresis and determining from internal organs. It is advantageous in nervous affections, rheumatism, gout, in certain cutaneous diseases, and in hepatic dyspepsia.

CHAPTER VI.

NATURAL HISTORY OF SOUTHPORT AND ITS ENVIRONS.

How wond'rous is this scene! where all is formed
With number, weight, and measure! all designed
For some great end! where not alone the plant
Of stately growth, the herb of glorious hue,
Or foodful substance; not the labouring steed,
The herd and flocks that feed us, not the mine
That yields us stores for elegance and use;
The sea that loads our tables, and conveys
The wanderer man from clime to clime; with all
The rolling spheres that from on high shed down
Their kindly influence: not these alone
Which strike e'en eyes incurious; but each moss
Each shell, each crawling insect holds a rank
Important in the plan of Him who framed
This scale of beings; holds a rank which lost
Would break the chain, and leave behind a gap
Which nature's self would rue.

STILLINGFLEET.

THE Natural History of Southport, surrounded as it is with sheer sand, extending inland for some miles, would appear to offer little variety in its objects, yet it possesses a *Fauna* by no means contemptible. Of Quadrupeds we have but few; of Birds an extensive variety; of Reptiles none of the family of snakes, but an abundance of other kinds; of Fishes the variety

is not great; of Insects we have a considerable number, and some of great beauty and rarity. The list of Mollusks is a slender one, and the Shells found on these shores are neither beautiful nor of great diversity, but of Cockles the number is immense, so much so, that tons are frequently sent off at a time; and of Shrimps the almost daily capture is enormous. Among the sandhills, at varying distances inland, there are a vast number of shells, of which we find no living representatives on the shore, obviously deposited at some distant period, when the sea extended over a large tract of country now of considerable elevation.

In Botany, the plants common to uncultivated hills and marshy places near the sea-coast are in great profusion and variety, principally flowering plants; of Ferns but few, not more than ten or twelve kinds. Mosses are numerous, and several kinds having hitherto been found only in the neighbourhood of Southport; of other Cryptogamic plants there is an extensive assortment, so that at all seasons we are able to procure botanical subjects of one kind or another.

We have but few Fossils in this neighbourhood, excepting the great quantities of submerged wood found in all directions around us. In Geology there is but little variety in this immediate locality, but at the distance of eight or ten miles a great change takes place in the aspect of the country and its products; the sand disappears, and extensive mosses or hills of considerable elevation, formed in most cases of deep alluvial soil, with rocks of the old red sandstone, succeed, and the botany consequently differs from that of the sand.

Alterations are constantly occurring in the appearance of the surrounding neighbourhood, from the subsidence or elevation

of some of the sandhills. In one instance, a tract of country between Birkdale and Ainsdale, with a farm and its accompaniments have been entirely buried, and the only vestiges now to be seen are the tops of some trees. The site has obtained the name of the "Lost Farm;" in fact, we rarely have a storm of wind, of long continuance, without a marked change taking place in the aspect of the hills.

On the shore, a little below the surface, is an immense deposit of peat, extending to a considerable depth, in which the remains of submerged trees abound; this extends to the mouth of the Mersey, and breaks out again on the opposite Cheshire shore, at New Brighton, and continues till it meets the Dee, at Hoylake, and, crossing this estuary, reappears on the Welsh coast. In this extent of peat, numerous animal remains are found, particularly in the vicinity of Leasowe Castle; some very perfect specimens, obtained in that neighbourhood, are in the possession of the Hon. Lady Cust, particularly the skull and horns of a species of ox (*Bos primogenius*), quite unknown in the recent state. Numerous other kinds have been exhumed in that locality, but we have not heard of any having been met with on this side of the Mersey.

We now proceed to enumerate the Mammalia found about Southport, limiting our notices to such as are met with within a distance of ten miles.

MAMMALIA OF SOUTHPORT.

Common Bat (*Vespertilio murinus*). The species is common, and appears about the end of June; this year (1858) we did not observe it after the first week in September.

Great Bat (*Vespertilio Nootulo*). This is less frequently seen than the preceding; it flies high, and may often be heard to utter a shrill squeak while on the wing.

Eared Bat (*Vespertilio auritus*). Not abundant, but is to be seen at dusk flying about with the common kind, from which its flight differs greatly.

Hedgehog (*Erinaceus europæus*). Found occasionally in shady banks and woody districts, though it is not common in the vicinity of Southport.

Common Shrew (*Sorex araneus*). Frequently to be met with in the marshy places among the sandhills; whether from disease, or from some cause not evident, this species is often found dead in the places it usually frequents; we have found four dead ones in a morning's walk.

Water Shrew (*Sorex fodiens*). Considerably larger than the preceding species; is common in marshes, readily takes water, and has a very foetid smell. Cats will often kill, but will not eat the shrew-mice, but they are greedily devoured by owls.

Mole (*Talpa europæa*). Very common in fields and cultivated places.

Weasel (*Mustela vulgaris*). This lively little animal is not abundant, but is occasionally seen under hedges and banks.

Ermine or Stoat (*Mustela Ermina*). This species is very rarely seen in this district in its white or winter coat, when it is the ermine; in its summer dress it is not very rare, frequently visiting the warrens and poultry-houses. In changing from its brown colour to white, it always retains the black extremity of the tail.

Polecat, or Foumart (*Mustela Putorius*). This is a much larger animal than either of the preceding species; it has an offensive smell, and is very destructive in warrens and amongst poultry; it is but rarely met with in this locality.

Common Otter (*Lutra vulgaris*). It is more than probable that this species may be occasionally seen in this neighbourhood, though we have never met with it. Various places within a few miles of Southport have the name of Otter appended, as Otterstye-bridge, on the Scarisbrick-road.

Common Seal (*Phoca vitulina*). Is sometimes met with by the fishermen off Southport, and a year ago a live one was shown about the town in a cart as a curiosity.

Common Mouse (*Mus Musculus*): Too common.

Field Mouse (*Mus sylvaticus*). Found frequently.

Black Rat (*Mus rattus*). Not common, but is occasionally found in the vicinity of granaries, and other farm buildings.

Brown Rat (*Mus decumanus*). Common.

Common Squirrel (*Sciurus vulgaris*). This is rare, being only found in woody situations. I am told it used to be found in Rufford Wood.

Hare (*Lepus timidus*). Abundant.

Rabbit (*Lepus cuniculus*). Abundant.

Common Dormouse (*Myoxus avellanarius*). Only to be found in woody, sheltered situations: has been met with at Ormskirk and Rufford.

Water Vole, or Common Water Rat (*Arvicola aquatica*). Very common in ditches and water courses.

Field Vole, or Short-tailed Field Mouse (*Arvicola agrestis*). Is very common in gardens and cultivated grounds, and is very destructive in young plantations.



SPOTTED WATER HEN.
(*Gallinula Porzana*.)

COMMON QUAIL.
(*Percix Cortunix*.)

DOTTEREL.
(*Charadrius Morinellus*.)

CHAPTER VII.

BIRDS OF SOUTHPORT.

Ten thousand warblers cheer the day, and one
The live-long night; not these alone, whose notes
Nice-fingered art must emulate in vain,
But cawing Rocks, and Kites that swim sublime
In still repeated circles screaming loud:
The Jay, the Pie, and e'en the boding Owl
That hails the rising moon, have charms for me.

COWPER.

THE elegance of form and disposition of colours in Birds must strike the least observant, while their habits and economy are fraught with constant interest; each kind, from the largest eagle to the minute wren, being furnished with the means and appliances best adapted for their support and for the preservation of their offspring. There are no general rules by which the various kinds exert their energies for the accomplishment of certain purposes, essential to their well-being; each species pursues its own particular mode with undeviating perseverance and instinctive accuracy. In building their nests each forms a structure peculiar to its species, and the materials of which they are composed are always the same, while in point of situation very little variation is observed. Those kinds that build in holes, either of trees or walls, or in bushes, as the Blue Titmouse and Chaffinch,

constantly assimilate the materials of the exterior of their nest to the surrounding objects. If the tree or wall be coated with lichens, the outside of the nest is covered with the same; if with green moss, this substance enters so largely into the fabric of the nest as to afford much security. Some species can scarcely be said to form a nest, but merely scrape a hole in the ground, as the Gulls and Terns, and that in so superficial a manner as to be barely sufficient to prevent the eggs rolling away. As a means of preservation, the eggs of most birds that build or nestle on the ground, are so nearly of the colour of the surrounding objects that they easily escape notice; this kind of protection is afforded to a large number of our native birds. Among the aquatic birds, some build floating nests, as the Water Hen and Coot, others interweave a leaf or stem of a growing plant, so contrived that the nest rises or falls according to the increase or decrease of the water, an instance of which is found in the Grebes.

Not the least interesting circumstance in the history of birds is their migrations. This is in consequence either of a failure of their necessary food, or change of temperature: some are unable to sustain the warmth of our summers, as many of the Duck tribe; others are not fitted for passing the winter in our northern clime, as the Swallow family; such as feed on insects resort to warmer countries, as the Cuckoo. Those species which frequent our shores during winter, have their bodies covered with a thick coat of down, which enables them to brave the severest weather. So thickly are some of the species clad, that they appear twice their real bulk, and with but few exceptions are so buoyant that no roughness of the water will sink them. The total number of

species either constantly residing or visiting Southport, is about one hundred and twenty or thirty; the constant residents are few, but they are frequently changing their localities, so that, with the exception of shore birds, we can scarcely calculate what species we may meet with at any time of the year, except during the breeding season.

The following list, we believe, will be found to be a pretty perfect record of the birds hitherto noticed in this neighbourhood. If any reader observes the absence of that favourite, the Nightingale, we may remark that it has not often, if ever, been found north of the Trent.

LAND BIRDS.

Kestrel (*Falco Tinnunculus*.) Very common on the sandhills, where they prey on young rabbits, small birds, and reptiles. This species may be readily known when on the wing, by its constantly hovering over its destined prey, from which circumstance it has obtained the name in many places of the Wind-over.

Sparrow-Hawk (*Falco Nisus*.) Occasionally seen on the sandhills; feeds principally on small birds and young rabbits. Mr. Graves remarks, "The kite, the ring-tailed-harrier, and the moor buzzard are said to be often seen on the meres and mosses. I have occasionally seen various kinds of hawks in this neighbourhood, but at such a distance as to prevent my ascertaining the species."

Merlin (*Falco Asalon*.) This elegant little species is frequently met with in pursuit of larks, and so determined is it while pursuing its prey, that I have known it pounce into a room where a small bird had taken refuge through an open window.

Short-eared Owl (*Strix brachiotus*.) Not uncommon on Martin Mere, and other mosses and meres in the vicinity. It is more frequently seen during dark days than either of the other kinds of Owl, hunting over fields in search of mice, shrew-mice, and small birds; it is an autumnal and winter bird.

Brown Owl (*Strix aluco*.) Usually known as the Screech Owl; not abundant, but may sometimes be met with in the slacks among the hills.

Barn or White Owl (*Strix flammea*.) This is the most common species in the neighbourhood of Southport, and is often seen on fine moonlight nights hunting over the fields in search of any small animals it can find; it swallows its food whole, and rejects the fur and feathers, it may have devoured, in the form of pellets.

Greater Butcher Bird (*Lanius Excubitor*.) This is of rather rare occurrence, but two or three specimens have been seen by Mr. Graves during the past summer, apparently searching for lizards, on the sandhills; these it transfixes on thorns and tears to pieces. It is very fierce, and pursues any small bird that may approach its place of resort. It builds its nest in trees, and is in the spring the terror of its lesser neighbours.

Red-backed Shrike, or Lesser Butcher Bird (*Lanius Collurio*.) Mr. Graves has given me the following interesting statement: "I have repeatedly seen this species in the vicinity of Southport; in one instance it had a large insect in its bill, and was a considerable time in search of something on which to impale it, which was at length accomplished by transfixing it on the indurated spines of a dead thistle.

At another time, I watched a pair that were hunting for insects and grubs in a potato field among the hills; they were not shy, and repeatedly passed so close to me that I could be quite certain of the species."

Hooded Crow (*Corvus Cornix*.) Seen occasionally during the autumn and winter months, resorting sometimes to the shore, and at others frequenting ploughed fields, attending on agricultural operations.

Rook (*Corvus frugilegus*.) Very common.

Jackdaw (*Corvus Monedula*.) This species is not common, but may be occasionally seen about Halsall and Scarisbrick, in company with rooks and gulls, and about Formby, associating with gulls and terns.

Magpie (*Corvus Pica*.) Only an occasional visiter.

Common Hoopoe (*Upupa epops*.) "A rare straggler. A few years ago, late in the summer, an individual of this species was shot in Birkdale, and brought to me alive, having only its wing broken. It walked about apparently without fear, erecting its crest. I have not heard of another being seen in the district."—*Mr. Tyrer*.

Cuckoo (*Cuculus canorus*.) Very common, I may say numerous; I have seen as many as seven at a time among the hills. Mr. Tyrer remarks, "the Cuckoo lays its eggs generally in the nest of the pipit lark." In the South of England, it is not unusual to find the Cuckoo's egg deposited in the nest of the hedge sparrow and pied wagtail.

Greater Titmouse (*Parus major*.) Has been seen frequently in Peter-street through the summer.

Marsh Titmouse (*Parus palustris*.) Frequently seen on the

willows and poplars so common in this neighbourhood, and is to be met with during the whole year.

Blue Titmouse (*Parus caeruleus*.) Very common.

Long-tailed Titmouse (*Parus caudatus*.) This was not in Mr. Tyrer's list, but has been since given to me with two or three others as an addition. A pair has been seen repeatedly by Mr. Graves in his garden during the summer, accompanied by six or seven young ones. They probably winter with us. They have been seen at intervals as late as the end of November.

Starling, or Chepster (*Sturnus vulgaris*.) Very common.

Missel Thrush, Storm Thrush, or Rain-bird (*Turdus viscivorus*.)

Common; acquires the name of Storm Thrush from its habit of singing during storms; feeds on berries of ivy, privet, &c.; also on snails and slugs.

Fieldfare (*Turdus pilaris*.) Not abundant, but often seen where there are trees of the mountain ash, haws, &c.; it usually arrives during October and leaves us early in the spring.

Song Thrush (*Turdus musicus*.) This universal favourite is common. It has, with other species, the curious habit of carrying snails to some particular or favourite stone, against which it readily breaks the shell and so obtains the slug. In the marshes among the sandhills, many of these stones may be found, surrounded by fragments of shells, particularly those of the wood snail (*Helix nemoralis*.)

Redwing (*Turdus iliacus*.) Frequents the same places as the fieldfare, with which it congregates, and consumes the same kinds of food.

Blackbird (*Turdus merula*.) Not abundant, but may frequently be seen in the valleys among the sandhills, breaking the snails like the song thrush; frequents plantations and orchards.

Ring Ousel (*Turdus torquatus*.) "A mere straggler; some few years ago I shot a solitary female in the Birkdale sandhills."—*Mr. Tyrer*.

Rose-coloured Ousel (*Pastor roseus*.) Montagu states that, about Ormskirk, it appears almost every season. None of my ornithological friends have met with it.

Greenfinch (*Loxia chloris*.) Very common.

Common Bunting (*Emberiza miliaris*.) Very abundant.

Yellow Bunting, or Yellow Hammer (*Emberiza citrinella*.) Common.

Marsh Bunting, or Reed Bunting (*Emberiza Scheniculus*.) Frequently met with in small flocks among the reeds and tall rushes, in the slacks between Ainsdale and Formby point.

Snow Bunting (*Emberiza nivalis*.) Occasionally among the reeds during the winter months, resorting to the same places as the last named species; in very severe weather it may sometimes be seen in the neighbourhood of farms, in company with other small birds.

House Sparrow (*Fringila domestica*.) Abundant everywhere.

Chaffinch, or Spink (*Fringila Cælebs*.) Not abundant, but usually found in the vicinity of houses.

Goldfinch (*Fringila carduelis*.) This is rare; last winter it frequented Peter-street, and it has since been seen behind the Rectory, and also at Birkdale, feeding on the seeds of the carline thistle.

Brown Linnet (*Fringila canabina.*) Common.

Redpole (*Fringila linaria.*) Occasionally seen in small flocks among the furze bushes, in the Birkdale and Ainsdale hills.

Spotted Fly-catcher (*Muscicapa grisola.*) Not abundant. Mr. Graves informs me that "a pair have been constant visitors in my garden during the past summer, and most likely have a nest near at hand. For hours together the one or other would perch on a dead branch, flying at each passing insect and returning to the same spot. It has a very lively but short note, and was quite disposed to become familiar. They disappeared early in the present month (October.)"

Skylark (*Alauda arvensis.*) Very abundant.

Titlark (*Alauda pratensis.*) Not uncommon, frequenting fields and grassy spots among the sandhills.

Pipit Lark (*Alauda trivialis.*) Common.

Pied Wagtail (*Motacilla Yarelli.*) Very common.

Yellow Wagtail (*Motacilla flava.*) Common in summer.

Grey Wagtail (*Motacilla boarula.*) They have appeared this summer in numerous small flocks, and have been as little shy as the robin.

Lesser Petty Chaps, or Chiff-Chaff (*Sylvia Hippolais.*) Not abundant, but often seen near Ainsdale.

Hedge Sparrow, or Dunnock (*Sylvia modularis.*) Very Common.

Whitethroat (*Sylvia cinerea.*) Not uncommon.

Sedge Warbler, Reed Wren (*Sylvia Salicaria.*) Common.

Robin Redbreast (*Sylvia rubecula.*) Common.

Wheatear (*Sylvia Oenanthe.*) Very abundant among the hills

round Southport. It is frequently captured in horse-hair snares placed in holes between sods. "They are most abundant in summer, but I liberated one that was snared as late as the beginning of December last year; it was a full-grown male bird. I took another out of one of the snares that appeared to have been a prisoner some days, as it was dead, no doubt starved. They probably remain during the winter, as they have been seen on the shore, turning over the seaweed left by the receding tide."—

Mr. Graves.

Whinchat (*Sylvia rubetra.*) Very common.

Stonechat (*Sylvia rubicola.*) Rare, but may sometimes be met with in Birkdale and Ainsdale, frequenting the tops of furze and other bushes.

Wren (*Sylvia Troglodytes.*) A winter visiter in this neighbourhood, seldom seen in the summer. "I had never observed it to breed here till the summer of 1858, when a pair made their nest and reared their young in a hole in the thatch of the cowhouse at Row-lane. In the winter there are generally Wrens about the homestead, and on fine days one may be often seen perched on the top of a post trilling his shrill ditty."—*Mr. Tyrer, in a note to me.*

Golden Crested Wren (*Sylvia regulus.*) This beautiful little bird may often be seen in Manchester-road on to Church-town. Its small size and the quickness of its movements will account for its not being more frequently observed. They probably breed here, as they have been seen from June to late in the season.

Yellow Willow Wren (*Sylvia Trochilus.*) Not uncommon.

Black cap, or Mock Nightingale (*Sylvia atricapilla*.) An abundant summer visiter, resorting to gardens and inclosures. Mr. Graves says, "a pair has been constant attendants on my garden operations; they often alighted on the upper branch of a tall willow, and poured forth their delightful note for a considerable time; while singing, each bird jerked up its tail in a manner similar to that of the wheatear."

Swallow (*Hirundo rustica*.) Abundant.

Martin (*Hirundo urbana*.) It appears from Mr. Tyrer's list that in the summer of 1857, Martins were not common in this vicinity; the present season must make up for former deficiencies, as round the northern parts of the town they have been in immense numbers during the whole summer, and at this time (the first week in October, 1858) may be seen skimming about in pursuit of insects, and not congregated as if for migration. On the 10th instant, the weather became very cold, and these birds were observed in great numbers on the roofs of houses, and the following day not a Martin was to be seen. We may remark that swallows left this neighbourhood two or three weeks earlier.

Sand Martin (*Hirundo riparia*.) Very common.

Swift, or Deviling (*Hirundo apus*.) Very common.

Ring-Dove, or Cushat (*Columba palumbus*.) Occasionally seen in considerable numbers, consorting with rooks, jackdaws, gulls, and other birds, in ploughed fields about Scarisbrick, Halsall, and the adjacent mosses; during winter they may be often seen in fields of turnips, the leaves of which are a favourite food.

Pheasant (*Phasianus colchicus*.) Is rarely seen in the immediate neighbourhood of Southport, and when met with is only a straggler from some of the preserves a few miles away.

Partridge (*Perdix cinerea*.) Very abundant.

Quail (*Perdix coturnix*.) Said to be frequently met with on the sandhills, at most times in the year; it is described as a summer visiter. I have not been so fortunate as to fall in with it, though once or twice I imagined I heard its peculiar note, between Birkdale and Ainsdale. During the autumn and winter, 1857-8, there was scarcely a week but some were exhibited for sale. I learnt they were procured a few miles inland, by persons who obtain a livelihood by snaring birds for the market. I have kept one alive for some weeks this winter; it was taken by a boy in the neighbourhood.

WADERS.

Birds whose legs are bare above the knees.

Common Heron, or Heronshaw (*Ardea major*.) This is occasionally seen on the shore, as also on the meres, but it is only a straggler

Bittern, or Bog-Bumper (*Ardea stellaris*.) More frequently heard than seen; it usually frequents extensive bogs and meres; its noise may be heard at a considerable distance, resembling a heavy note on a drum or other hollow substance.

Curlew (*Numenius arquata*.) Frequent on the shore, particularly about the Ribble on the north and the Alt on the south; in autumn it is often met with in stubble fields, searching for slugs, snails, worms, and any grain that may be scattered about.

Whimbrel (*Numenius phaeopus*.) Not uncommon; it is less than the Curlew, its bill not so much curved; it feeds on similar substances and resorts to similar situations, and much resembles the Curlew in arrangement of its colours.

Woodcock (*Scolopax rusticola*.) Scarce in the immediate neighbourhood of Southport, but it is to be found occasionally about Martin Mere, Ormskirk, Halsall, and Formby. Mr. Tyrer says, "Some years ago I shot a solitary individual in the sand hills."

Common Snipe (*Scolopax gallinago*.) Frequent in the mosses.

Jack Snipe, or Judcock (*Scolopax gallinula*.) Common.

Redshank (*Scolopax calidris*.) Common in the marshes from September to early in the following year. I believe some breed in Martin Mere, as I have seen them on the mere in the months of May and June.

Common Godwit (*Scolopax lapponica*.) Frequent on the meres and salt marshes.

Black-tailed Godwit (*Scolopax limosa*.) Once or twice this bird was exposed for sale in the market, with the Redshank and other shore birds. I have not met with it alive.

Common Sandpiper (*Tringa hypoleucos*.) Not abundant, but often seen during the summer months.

Dunlin, Purre, Oxeye, or Sea-lark (*Tringa alpina*.) Common; a few breed in this neighbourhood.

Little Stint, or Sandpiper (*Tringa minuta*.) Common in autumn on the meres.

Knot (*Tringa Canutus*.) Arrives here about the beginning of autumn and abides during winter. I suspect that some breed on Martin Mere, as they may occasionally be seen in April and May.

Turnstone (*Tringa interpres*.) Resides here during autumn and winter, resorting to the shore, salt marshes, and meres; a few probably breed here, as they have been met with in the middle of May.

Ruff, *the male*; Reeve, *female* (*Tringa pugnax*.) Formerly very abundant, but from the draining of the mosses are now comparatively rare. Their flesh is esteemed a great delicacy, and numbers are annually caught and fattened for the table. It is likely that a few remain through the year, as after the breeding season is over the males lose their ruff, which is their distinguishing mark, and can then scarcely be recognised from some of their closely-allied congeners.

Austrian Pratincole (*Glareola torquata*.) A specimen of this rare bird was shot near Ormskirk, in 1807; it was long in the possession of the late Lord Derby, and is now in the Museum, Liverpool.

Grey Plover (*Tringa squatarola*.) Not uncommon in winter.

Lapwing, Tu-it, or Pewit (*Tringa vanellus*.) Considered in this locality as a summer bird, but we believe it merely changes its place of resort for a short time, as we have seen them within a few miles of Southport almost every month in the year.

Golden Plover (*Charadrius plumbealis*.) Not uncommon in the slacks about Ainsdale, during summer and winter; it may have been considered a distinct species in the winter season, as at that time it loses all the black on its back and breast.

Dottrel (*Charadrius morinellus*.) This pretty bird regularly visits the fields and mosses round Southport, in its migra-

tions to and from the north; they are stupid birds, and will suffer one to go close to them if the party only keeps in motion.

Ring Plover (*Charadrius Hiaticula.*) Common on the sandhills about Birkdale and Ainsdale; some breed in the marshes among the hills.

Sanderling (*Calidris arenaria.*) Not uncommon.

Curlew-billed Sandpiper (*Scolopax pygmaea.*) We have not met with this species, but Mr. Tyrer says, "An autumn visiter, not uncommon; individuals of this species are occasionally taken in snares on the mere in September and October, it also associates with Purres on the shore."

Water Rail *Rallus aquaticus.*) Found occasionally on the mosses and meres, but is not a common bird near Southport

Corncrake, or Landrail (*Rallus orea.*) Frequents fields and cultivated grounds, but is not common.

Oyster Catcher, Sea-pie, or Sepoy (*Hæmatopus Ostralegus.*) Very common on the shore during winter, also on the salt marshes where they are taken in nets.

WATER BIRDS—with *pinnated feet.*

Red Phalarope (*Tringa hyperborea.*) Very rare, an individual was shot in 1832.

Grey Phalarope (*Tringa lobata.*) This is not so rare as the last species, but we have not been so fortunate as to meet with it. Mr. Tyrer says, "it is occasionally met with in stormy weather, about the equinox, in the puddles on the marsh."

Bald Coot (*Fulica atra.*) Occasionally on Martin Mere, and in the various sluices and water courses through the mosses.

Common Gallinule, or Water Hen (*Gallinula chloropus*).

Frequents the same places as the Coot, but is more an inland bird.

Spotted Water Hen (*Gallinula Porzana*). Not uncommon on the meres and mosses round Southport.

Crested Grebe (*Podiceps cristatus*). This, the largest of the British Grebes, is a rare visiter. Mr. Graves has seen two or three in rather severe weather, close in shore, at Formby Point, and in the Mersey, off Formby Life-boat House, August, 1858.

Eared Grebe (*Podiceps auritus*). Rare, but has been met with on Martin Mere.

Little Grebe, Dabchick, or Little Douker (*Podiceps minor*).

Is occasionally seen in the ponds and cuttings flowing into the Ribble, at Crossens. Mr. Graves has seen it in the vicinity of Halsall.

WEB-FOOTED BIRDS.

Avocet (*Recurvirostra Avocetta*.) This is apparently a very rare visiter. Mr. Graves saw a flock of four or five birds between Crossens and the Banks.

Razor Bill (*Alca torda*.) Two specimens have been found dead on the shore, one at Ainsdale, the other opposite the Fleetwood arms.

Auk, Puffin, or Coulterneb (*Alca Arctica*.) The remains of one were found on the shore; it had probably been shot at sea and floated in by the tide.

Little Auk (*Mergulus melanoleucos*.) This rare little bird sometimes visits our shores; Mr. Tyrer mentions having had two brought to him, picked up on the sands; and one was shot during the present month (November, 1858) between Crosby and Bootle.

Foolish Guillemot (*Uria Troile.*) I have seen this bird at sea off Southport, in flocks of four or six; they dive so rapidly that they are difficult to obtain, but are occasionally found entangled in the fishing nets.

Common Cormorant (*Pelicanus Carbo.*) This species is usually met with in rocky places. Mr. Graves saw a fine specimen perched on the ridge of a sandhill near Formby point, August, 1858.

Gannet, or Solan Goose (*Sula Bassana.*) Frequent off the coast during the winter months.

Scoter, or Black Douker (*Anas nigra.*) Rarely comes to shore, though often seen off Southport; it is one of the few ducks scarcely fit for human food.

Golden-eyed Duck (*Anas clangula.*) Not common, but may often be seen in the market.

Pochard, or Red-headed Widgeon (*Anas ferina.*) Rare.

Scaup Duck (*Anas marila.*) Not common.

Tufted Duck (*Anas fuligula.*) Not common.

Shieldrake (*Anas Tadorna.*) Not common; has been known to breed in the Ainsdale hills.

Shoveller Duck (*Anas clypeata.*) Rare. We have met with this very distinct species twice, both inland, one near Scarisbrick, the other on Martin Mere

Wild Duck, or Mallard (*Anas Boschas.*) Common on inland lakes and ponds.

Pintail Duck (*Anas acuta.*) Common.

Widgeon (*Anas Penelope.*) Common.

Teal (*Anas crecca.*) Very common in fresh water inlets.

Wild Swan (*Anas Cygnus ferus.*) Only seen during very severe weather, and then but rarely.

Wild or Grey Goose (*Anas anser*.) Often seen during severe weather; at times it may be met with on Martin Mere.

Bernaule Goose (*Anas Bernicla*.) Occasionally seen during stormy weather.

Brent Goose (*Anas Brenta*.) This and the preceding species were often for sale in Southport market last winter. The Brent Goose is not an uncommon visiter on stubble fields and cultivated lands.

Goosander, MALE, (*Mergus Merganser*); Dun Diver, FEMALE, (*Mergus Castor*.) Not uncommon, and frequently sold as wild ducks, but the flesh is rancid, and quite unfit for food.

Red-breasted Goosander (*Mergus serrator*.) There was a single specimen last winter in Southport market.

Smew (*Mergus albellus*.) This, like the last, I have only seen in the market, but more frequently than any of the other kinds of *Mergus*.

Northern Diver or Loon (*Colymbus glacialis*.) A specimen was brought into Southport during last winter, having got entangled in the nets; it was a splendid bird, and was sold to a bird-stuffer from Manchester.

Red-throated Diver or Loon (*Colymbus septentrionalis*.) Is not uncommon off the coast, and is occasionally taken in the nets.

Stormy Petrel, or Mother Carey's Chicken (*Procellaria pelagica*.) This bird of ill omen is often found dead on the shore, after severe gales of wind.

Greater Black-backed Gull (*Larus marinus*.) Common, both young and adult; they do not attain their full plumage till after the third year.

G*

Lesser Black-backed Gull (*Larus fuscus*.) Frequent.

Herring Gull (*Larus argentatus*.) Common.

Common Gull (*Larus canus*.) Very abundant, resorting with other species to fields and ploughed lands.

Kittiwake (*Larus Rissa*.) Less common than the preceding.

Black-headed Gull (*Larus ridibundus*.) Very common, both on the shore and inland.

Black-toed Gull (*Larus Crepiditus*.) "A rare straggler, probably the young of the Arctic Gull; an individual was shot on the marsh a few years ago, in September, the weather stormy."—*Mr. Tyrer*. We are unacquainted with it.

Arctic Gull (*Larus Parasiticus*.) *Mr. Tyrer* remarks, that this also "is a rare straggler, and that an individual of the species was killed at Martin Mere, a few days previous to the above noticed specimen of the Black-toed Gull being obtained."

Sandwich Tern (*Sterna Boysii*.) Not abundant.

Roseate Tern (*Sterna Dougallii*.) Frequently seen with the Common Tern, about the sandhills at Formby point, and Ainsdale, and in the slacks among the hills, where it breeds in company with other species.

Common Tern, or Sea Swallow (*Sterna Hirundo*.) Very common in the above-named localities.

Black Tern (*Sterna nigra*.) We have seen a few of this, associating with other species, among the Ainsdale hills.

Lesser Sea Swallow, or Little Tern (*Sterna minuta*.) Occasionally seen with the other species, in the same localities.

CHAPTER VIII.

PLANTS OF SOUTHPORT.

"I have cured weak stomachs by engaging the persons in the study of Botany, and particularly in the investigation of our native plants."

Dr. CULLEN.

Abundant and diversified above
All number, were the sources of delight;

* * * * *

One made acquaintanceship with plants and flowers,
And happy grew in telling all their names."

POLLOCK.

No branch of natural history affords more real pleasure than the study of Botany; and whether pursued as mere amusement, or for scientific purposes, it is alike valuable. The healthful exercise of collecting plants in their native localities, and the amusement afforded by the research, mentally and bodily, tend to that renovation of the physical powers for which the valetudinarian seeks the healthful shores of Southport. Though no striking or picturesque scenes are to be met with, the range of hills by which it is partially surrounded is so interspersed with valleys and marshy land, in addition to the mosses and meres more inland, that a very extensive field

for botanical pursuits is opened to the student, and no slight pleasure is to be found in accumulating the beautiful floral treasures of its neighbourhood.

A botanist rambling among the sandhills will observe numerous plants usually described as affecting chalky districts, in the southern parts of the kingdom; some that are natives of the highest hills or mountains are abundantly found here. Some plants will be found in great profusion that are of rare occurrence in other localities; others that are found in dry and chalky places are here to be met with in wet or marshy spots, so that the Flora of Southport will be found much more extensive than might have been expected from the monotonous sand by which it is surrounded. Some of those mentioned in the list can only be esteemed as outcasts from neighbouring gardens, or have been carted away with manure, and finding a congenial soil grow spontaneously in various places. Of those kinds whose seeds are furnished with a pappus, as the Dandelion, a considerable variety are found that are not common to other parts of this kingdom, but we are not aware of any plants except mosses that are exclusively natives of this place.

Of grasses the most abundant is the Marram or Starr Grass, which luxuriates on the shore and on the hills, where it is planted, with Wheat grass, Sand Carex, and other creeping kinds, to prevent the sand from being swept away by the winds. Agriculturally these grasses are worthless, but the cottagers cut the stems of the starr-grass for making mats, &c. An error exists with respect to the cutting of this species, and persons are liable to a fine or imprisonment for so doing; whereas mowing it is of the greatest benefit, the strength

of the plant being thus thrown into the root. In some instances, where it had been cut, the root extended from fourteen to twenty feet, and the crown of the roots had comparatively little foliage. The various dwarf willows also largely contribute to bind the sands: excepting willows, none of the trees found in the immediate neighbourhood of Southport are indigenous, and but few kinds thrive so well as when growing on other soils.

Though there is such an extent of shore, there is but a very scanty supply of that beautiful tribe of plants known as sea-weeds. Few are natives, but after heavy winds, particularly from the south-west, many are brought to shore, though in a broken and injured state. Of the larger and coarser sorts, which abound in the Isle of Man, immense quantities are brought here with every severe gale, but the beautiful red kinds, so abundant on the rocks and shores of Mona, are of very rare occurrence. The Sea-wrack, or *Zostera marina*, often appears in great quantities. Mosses are abundant, but as the greater number produce their fruit during the winter months, they are not likely to be sought for by convalescents. They are a numerous and beautiful family, their structure affording most interesting objects for microscopic investigation.

PLANTS OF SOUTHPORT.

Common, or Jointed Glasswort (*Salicornia herbacea*.) A common species abundant on our shores, frequently gathered and sold in the market as Samphire, for pickling. This, however, must not be confounded with the true Samphire (*Crithmum maritimum*), a plant found only on almost inaccessible rocks on the sea-coast, as alluded to by Shakspeare, in King Lear.

Mare's-tail (*Hippuris vulgaris*.) In most of the ditches and water-courses in this vicinity; a peculiarly interesting plant, and an instance of the simplest form of flower known. The only British species.

Common Privet (*Ligustrum vulgare*.) In hedge-rows, &c., common; found only truly wild on precipitous limestone cliffs and rocks, generally near the sea.

Thyme-leaved Speedwell (*Veronica serpyllifolia*.) The name of Veronica is from that of a female saint.

Marsh Speedwell (*Veronica scutellata*.) In ditches, abundant.

Water Speedwell (*Veronica Anagallis*.) Common.

Brooklime (*Veronica Beccabunga*.) Sometimes used as a salad.

Common Speedwell (*Veronica officinalis*.) Common.

Mountain Speedwell (*Veronica montana*.) Less abundant than the preceding.

Germander Speedwell (*Veronica Chamædrys*.) Abundant on banks, and in fields, and woods, enlivening the scenery with its splendid blue flowers; it is particularly ornamental on rockeries.

Ivy-leaved Speedwell (*Veronica hederifolia*.) Common.

Long-stemmed Speedwell (*Veronica filiformis*.)

This species, though not observed by Dr. Wood, grows sparingly by the road side between Crossens and the Banks.

Green Procumbent Field Speedwell (*Veronica agrestis*.) Common.

Wall Speedwell (*Veronica arvensis*.) Common,

Common Butter-wort (*Pinguicula vulgaris*.) W.; A.

Bladder-wort (*Utricularia minor*.) W.

Gipsy-wort (*Lycopus europæus*.) Used by the wandering tribes to dye their skins.

Common Enchanter's Nightshade (*Circœa Lutetiana.*) W.

Ash-tree (*Fraxinus excelsior.*) W.

Ivy-leaved Duckweed (*Lemna trisulca.*)

Greater Duckweed (*Lemna polyrrhiza.*) W.

Lesser Duckweed (*Lemna minor.*)

Gibbous Duckweed (*Lemna gibba.*) G.

The species are all found in ponds and water-courses; the *trisulca* is a favourite food of water-snails; the two former are common, but the *gibba* is rare; Dr. Wood has not met with it here.

Prickly Twig-rush (*Cladium mariscus.*) In marshy places, but rare.

Sweet Vernal Grass (*Anthoxanthum odoratum.*) This is very fragrant, particularly whilst drying, and is the principal species affording the delightful fragrance to newly mown hay.

Small Marsh Valerian (*Valeriana dioica.*)

Great Wild Valerian (*Valeriana officinalis.*) Both species abound in wet situations; the latter is in considerable request for medical purposes.

Lambs' Lettuce, or Corn Salad (*Fedia olitoria.*) Used as a salad.

Smooth Narrow-fruited Corn Salad (*Fedia dentata.*) G.

Yellow Iris, or Fleur de luce (*Iris pseud-acorus.*) Very abundant. This was the old symbol of the Bourbons, and was first called Fleur de Louis.

Black Bog-rush (*Sphænus nigricans.*) Wet places, but rare.

Beak-rush (*Rhynchospora alba.*) W.

Bristle-stalked Club-rush (*Scirpus setaceus*)

Lake Club-rush, or Bull-rush (*Scirpus lacustris.*) In marshes about Formby, but not abundant.

Sea Club-rush (*Scirpus maritimus*.)

Wood Club-rush (*Scirpus sylvaticus*.) W.

Broad-leaved Blysmus (*Blysmus compressus*.) Abundant from Birkdale to Formby.

Narrow-leaved Blysmus (*Blysmus rufus*.) Occasionally found on the salt marshes.

Creeping Spike-rush (*Eleocharis palustris*.)

Many-stalked Spike-rush (*Eleocharis multicaulis*.)

Chocolate-headed Spike-rush (*Eleocharis paniculata*.)

Scaly-stalked Spike-rush (*Eleocharis caespitosa*.)

Least Spike-rush (*Eleocharis acicularis*.) G.

Floating Spike-rush (*Eleocharis fluitans*.)

Hare's-tail Cotton-grass (*Eriophorum vaginatum*.)

Broad-leaved Cotton-grass (*Eriophorum polystachion*.)

Common Cotton-grass (*Eriophorum angustifolium*.) In the marshes, meres, and mosses, very common.

Mat-grass (*Nardus stricta*.) On all our salt marshes.

Meadow Fox-tail Grass (*Alopecurus pratensis*.) One of the most productive and valuable of our native grasses.

Slender Fox-tail Grass (*Alopecurus agrestis*.)

Floating Fox-tail Grass (*Alopecurus fluitans*.) Very abundant in wet places; when growing on dry ground it becomes much smaller.

Cultivated Canary Grass (*Phalaris canariensis*.) W.

Reed Canary Grass (*Phalaris arundinacea*.) W.

Sea-reed, Starr-grass, or Bent (*Ammophila arundinacea*.) Most useful in binding the sand together; frequently it extends its roots twelve or fourteen feet; it is specially protected by law.

Common Cat's-tail Grass (*Phleum pratense*.)

- Sea Cat's-tail Grass (*Phleum arenarium.*) Both kinds abundant on the sandhills.
- Awed Nit-grass (*Gastridium lendigerum.*) G.
Scarce; usually found in places subject to occasional inundations.
- Beard-grass (*Polypogon littoralis.*) A.
- Purple-flowered Small-reed (*Calamagrostis lanceolata.*) Moist places, common.
- Brown Bent-grass (*Agrostis canina.*) Abundant on the salt marshes, as well as on meres and bogs.
- Bristle-leaved Bent-grass (*Agrostis setacea.*) Very rare, but is occasionally met with on the shallows that are at times overflowed by the tide. G.
- Silky Bent-grass (*Agrostis spica-venti.*) Rare, but found in the cuttings through some of the mosses. G.
- Common Bent-grass (*Agrostis vulgaris.*)
- Marsh Bent-grass (*Agrostis alba.*) Both very abundant.
- Whorl-grass (*Catabrosa aquatica.*) Varies greatly in size; it is one of the sweetest of our native grasses.
- Crested Hair-grass (*Koeleria cristata.*) On the sandhills.
- Tufted Hair-grass (*Aira cæspitosa.*) Moist places, abundant.
- Silvery Hair-grass (*Aira caryophylla.*)
- Early Hair-grass (*Aira præcox.*) Both species very common on the sandhills.
- Wood Melic (*Melica uniflora.*) W.
- Purple Melic-grass (*Molinia cærulea.*) Used in some parts for making besoms; common on the sides of water courses.
- Creeping Soft-grass (*Holcus mollis.*) Easily distinguished from the following by the tufts of hair on the knots of the stalks.

Meadow Soft-grass (*Holcus lanatus*.) Both kinds common.

Oat-like Grass (*Arrhenatherum avenaceum*.) Plentiful.

Water Meadow-grass (*Poa aquatica*.) Scarce in this vicinity, but abundant in the south and east of England; found on the banks of ditches and ponds, forming the principal crop of grass in the fenny countries.

Floating Meadow-grass (*Poa fluitans*.) Is much relished by cattle, and is abundant, but from the situations it affects is of little account with the agriculturist.

Creeping Sea Meadow-grass (*Poa maritima*.) Common in salt marshes.

Reflexed Meadow-grass (*Poa distans*.)

Procumbent Meadow-grass (*Poa procumbens*.) Common from Formby point to Crossens, in the parts only occasionally overflowed by the sea.

Hard Meadow-grass (*Poa rigida*.) Common on walls and dry uncultivated places.

Dwarf Wheat Meadow-grass (*Poa loliacea*.)

Rough-stalked Meadow-grass (*Poa trivialis*.)

Smooth-stalked Meadow-grass (*Poa pratensis*.) These two, with *Alopecurus pratensis*, constitute the bulk of our grass crops, and are to be found in all good meadows, and for green pasturage they are invaluable to the cultivator.

Annual Meadow-grass (*Poa annua*.) Abundant everywhere.

Decumbent Heath-grass (*Triodia decumbens*.) W.

Quaking-grass (*Briza media*.) Very abundant.

Small Quaking-grass (*Briza minor*.) "This is scarcely of less size than the *media*, but is not so common; the only locality I know of is in a field near Martin Mere."—G.

Rough Cock's-foot Grass (*Dactylis glomerata*.)

Crested Dog's-tail Grass (*Cynosurus cristata*.) A valuable pasturage grass, of common occurrence.

Sheep's Fescue-grass (*Festuca ovina*.) Occasionally on the sandhills, both in its common and oviparous states.

Hard Fescue-grass (*Festuca duriuscula*.) Abundant near the sea.

Creeping Fescue-grass (*Festuca rubra*.)

Barren Fescue-grass (*Festuca bromoides*.) Not common.

Wall Fescue-grass (*Festuca Myurus*.) G.

Single-glumed Fescue-grass (*Festuca uniglumis*.) Common on the sandhills from Birkdale to Formby.

Meadow Fescue-grass (*Festuca pratensis*.) A valuable grass, common; it is esteemed equal to the *Poas* before-named.

Barren Brome-grass (*Bromus sterilis*.) Very common in hedge rows.

Hairy Wood Brome-grass (*Bromus asper*.) W.

Smooth Rye Brome-grass (*Bromus secalinus*.) Sometimes met with, but not common.

Soft Brome-grass (*Bromus mollis*.) Most abundant.

Smooth Brome-grass (*Bromus racemosus*.) Fields, common.

Taper Field Brome-grass (*Bromus arvensis*.) G.

In fields, but not plentifully.

Upright Brome-grass (*Bromus erectus*.) G.

Narrow-leaved Oat-grass (*Avena pratensis*.) ?

Yellow Oat-grass (*Avena flavescens*.) In fields and sandhills.

Wild Oat (*Avena fatua*.) W.

Bristle-pointed Oat-grass (*Avena strigosa*.) W.

Reed (*Phragmites communis*.) In great demand for economical purposes, such as garden screens, thatching, brick-

making, &c. The leaves are employed by the poor for mat making, and the flowers afford a *nidus* for a considerable variety of insects, particularly the smaller kinds of moths; it is naturally an aquatic, but grows abundantly in corn-fields in the neighbourhood, where in deep draining the roots have been spread over the land.

Upright Sea Lyme-grass (*Elymus arenarius*.) G.

Used like the starr-grass to bind the sands.

Wall Barley-grass (*Hordeum murinum*.) A.

Meadow Barley-grass (*Hordeum pratense*.)

Sea-side Barley-grass (*Hordeum maritimum*.) G.

Creeping Wheat-grass, Couch-grass, or Twitch (*Triticum repens*.)

Rushy Sea Wheat-grass (*Triticum junceum*.) Most abundant along the coast, even within tide-mark.

False Brome-grass (*Brachypodium sylvaticum*.) W.

Perennial Darnel, or Rye-grass (*Lolium perenne*.)

Sea Hard-grass (*Lepturus incurvatus*.) Sparingly on the shores above high-water mark.

Water-blinks, or Chickweed (*Montia fontana*.) Wet and boggy places, common.

Four-leaved Allseed (*Polycarpon tetraphyllum*.) G.

Rare, between Ainsdale and the Ash-tree.

Fuller's Teazel (*Dipsacus fullonum*.) Borders of fields; rare.

Wood Teazel (*Dipsacus sylvestris*.) A.

Field Knautia (*Knautia arvensis*.)

Devil's-bit Scabious (*Scabiosa succisa*.)

Small Scabious (*Scabiosa Columbaria*.) Less abundant than the last species, but not rare.

Yellow Bed-straw (*Galium verum*.) Very common.

White Water Bed-straw (*Galium palustre.*) Plentiful in wet situations.

Rough Marsh Bed-straw (*Galium uliginosum.*)

Cross-wort (*Galium cruciatum.*) W.

Smooth Heath Bed-straw (*Galium saxatile.*)

Upright Bed-straw (*Galium erectum.*) ? Borders of fields and hedges; rare

Great Hedge Bed-straw (*Galium mollugo.*)

Least Mountain Bed-straw (*Galium pusillum.*)

Goose-grass, or Cleavers (*Galium Aparine.*) Formerly several of these species were in general use for stuffing beds, cushions, &c., from whence they derive their English name. The root of the Yellow Bed-straw was much used in dyeing, and affords a finer red than madder. The seeds of Goose-grass have been used instead of coffee.

Wood-ruff (*Asperula odorata.*) W.

Blue Sherardia, or Field Madder (*Sherardia arvensis.*) Common on the roads and waysides.

Greater Plantain (*Plantago major.*) A great favourite with small birds; common everywhere.

Hoary Plantain (*Plantago media*)?

Ribwort Plantain (*Plantago lanceolata.*) Abundant.

Sea-side Plantain (*Plantago maritima.*)

Buck's-horn Plantain (*Plantago coronopus.*)

The two last species very abundant, on the coast and far inland.

Mouse-tail (*Centunculus minimus.*) W.

Allseed (*Radiola millegrana.*) W.

Pellitory of the Wall (*Parietaria officinalis.*) Churchtown, not uncommon on old walls.

Field Ladies' Mantle (*Alchemilla arvensis*.) Exceedingly common.

Great Burnet (*Sanguisorba officinalis*.) Very abundant in moist meadows, between Churchtown and Crossens.

Common Holly (*Ilex aquifolium*.) In hedges, copses, &c. ; in Glen Albyn, in the Isle of Man, are several trees more than a foot in diameter, and full thirty feet in height.

Pondweed (*Potamogeton densus*.) ?

Fennel-leaved Pondweed (*Potamogeton pectinatus*.)

Small Pondweed (*Potamogeton pusillus*.)

Grass-leaved Pondweed (*Potamogeton gramineus*.)

Grass-wrack-like Pondweed (*Potamogeton zosterifolius*) ?

Curled Pondweed (*Potamogeton crispus*.)

Perfoliate Pondweed (*Potamogeton perfoliatus*.)

Shining Pondweed (*Potamogeton lucens*) ?

Reddish Pondweed (*Potamogeton rufescens*.)

Sharp-pointed broad-leaved Pondweed (*Potamogeton natans*.)

Oblong-leaved Pondweed (*Potamogeton compressum*.) W.

A variety of *Potamogeton pusillus* ?

All the Pondweeds are abundant wherever they can gain a footing, and speedily choke up slow streams or ponds. Their leaves are beautifully reticulated, and afford a *nidus* and food to a great variety of insects and snails.

Sea Ruppia (*Ruppia maritima*.) Common in many of the salt water courses.

Procumbent Pearlwort (*Sagina procumbens*.)

Annual Small-flowered Pearlwort (*Sagina apetala*.)

Sea Pearlwort (*Sagina maritima*.) Common on the coast.

Awl-shaped Pearlwort (*Sagina subulata*.)

Vipers' Bugloss (*Echium vulgare*.) Abundant at Birkdale, and all along the coast to Formby.

Gromwell (*Lithospermum officinale*.) In fields near Ainsdale station.

Bastard Alkanet, or Corn Gromwell (*Lithospermum arvense*.) About Ainsdale.

Borage (*Borago officinalis*.) Scarcely a native, but has become common from being the outcast of gardens.

Small Bugloss (*Lycopsis arvensis*.)

Forget-me-not (*Myosotis palustris*.)

Tufted Water Scorpion-grass (*Myosotis caespitosa*.)

Field Scorpion-grass (*Myosotis arvensis*.)

Early Scorpion-grass (*Myosotis collina*.)?

Yellow and Blue Scorpion-grass (*Myosotis versicolor*.) Common on waste places, walls, and in many parts of the sandhills.

Hound's tongue (*Cynoglossum officinale*.) Plentiful.

Scarlet Pimpernel (*Anagallis arvensis*.) Sometimes found with white or blue flowers.

Bog Pimpernel (*Anagallis tenella*.) A very delicate plant.

Great Yellow Loosestrife (*Lysimachia vulgaris*.) Formerly common, but from the draining of the land not now often found.

Wood Loosestrife, or Yellow Pimpernel (*Lysimachia nemorum*.) In woods, and moist shady places, common.

Moneywort, or Herb Twopence (*Lysimachia Nummularia*.)

Primrose (*Primula vulgaris*.) Very common; in the neighbourhood is found a variety of the common primrose on a stalk, like the oxlip or cowslip, particularly about the Rectory, also with purple flowers.

Oxlip (*Primula elatior*)? In damp meadows.
 Cowslip, or Paigle (*Primula veris*.)

And I serve the fairy queen
 To dew her orbs upon the green;
 The Cowslips tall her pensioners be;
 In their gold coats spots you see;
 Those be freckles, fairy favours,
 In those freckles live their savours;
 I must go seek some dew-drops here
 And hang a pearl on every Cowslip's ear.



SHAKESPEARE.

Water Violet (*Hottonia palustris*.) This is one of the most
 • beautiful of our aquatic plants, and is well adapted for
 aquaria; grows abundantly in most of the water-courses
 and ditches round Southport.

Buckbean, or Marsh Trefoil (*Menyanthes trifoliata*.)

Oft where the stream meandering glides,
 Our beauteous MENYANTHES hides
 Her clustering, fringed flowers;
 Nor, 'mid the garden's sheltering care,
 Or famed exotics, rich and rare,
 Purple or roseate, brown or fair,
 A plant more lovely towers.

The Buckbean, both in form and colour, rivals many of
 the foreign plants cultivated in this country at great
 expense and trouble. It keeps in bloom for some weeks.
 The easiest mode of culture is to obtain roots early in the
 year, and plant them in a garden pot, which for the
Hottonia should be submerged; for the *Menyanthes*,
 keeping the pot constantly standing in water, will answer
 very well. Found abundantly in wet places round
 Southport.

Common Centaury (*Erythræa centaureum*.)

Dwarf-branched Centaury (*Erythraea pulchella*.)

Dwarf-tufted Centaury (*Erythraea linarifolia*.)

Broad-leaved tufted Centaury (*Erythraea latifolia*)?

All the species are common on the shores, salt-marshes, and among the sandhills; the first and last species vary greatly in size, being often only an inch in height and frequently attaining 10 or 12 inches and more; the other two species are very dwarf, rarely exceeding two or three inches. The whole are beautiful, varying from a full rose colour to pure white; they are intensely bitter, from which circumstance they acquired the name of Gall of the Earth.

Thorn Apple (*Datura Stramonium*.) In waste places; but a doubtful native.

Henbane (*Hyoscyamus niger*.) Probably an outcast from gardens.

Woody Nightshade, or Bittersweet (*Solanum Dulcamara*.)

Common by the sides of ditches.

Garden Nightshade (*Solanum nigrum*.) In waste grounds.

Great Mullein (*Verbascum Thapsus*.) A.

Small Bindweed (*Convolvulus arvensis*.)

Woody Bindweed (*Calystegia Sepium*.) Common, though less so than the preceding.

Sea Calystegia, or Bindweed (*Calystegia Soldanella*.) This beautiful species is abundant on the sandhills skirting the shore.

Brookweed (*Samolus Valerandi*.) Common in all the marshy places among the hills.

Annual Sheep's Scabious (*Jasione montana*.) On dry sandy places remote from the sea; particularly abundant on the moss about Halsall.

Round-leaved Bell-flower, or Hare-bell (*Campanula rotundifolia.*) On the sands, often ranging with pure white flowers. This is unquestionably the plant to which the poet refers—

E'en the light HARBELL raised its head,
Elastic from her airy tread;—

and not the *Hyacinthus non scriptus.*

Giant Bell-flower, or Throatwort (*Campanula latifolia.*) W.

Ivy-leaved Bell-flower (*Campanula hederifolia.*) A.

Honeysuckle, or Woodbine (*Lonicera Periclymenum.*) Common in hedges and copses.

Hairy Violet (*Viola hirta.*) Found sparingly among the sandhills.

Sweet Violet (*Viola odorata.*) W.

Marsh Violet (*Viola palustris.*) Very common in moist boggy ground all round Southport.

Dog's, or Scentless Violet (*Viola canina.*)

Dwarf Yellow-spurred Violet (*Viola flavicornis.*)

Pansy Violet, or Heart's-ease (*Viola tricolor.*)

Yet marked I where the bolt of cupid fell;
It fell upon a little western flower—
Before milk-white; now purple with love's wound—
And maidens call it LOVE-IN-IDLENESS.
Fetch me that flower; the herb I showed thee once;
The juice of it on sleeping eyelids laid,
Will make a man or woman madly doat
Upon the next live creature that it sees.

SHAKESPEARE.

Yellow Pansy (*Viola lutea.*) A.

Common Gooseberry (*Ribes grossularia.*) In hedgerows, but can scarcely be considered wild.

Common Ivy (*Hedera helix.*) Abundant.

Sea Milkwort, or Black Saltwort (*Glaux maritima*.) Most abundant in all the salt marshes.

Whorled Knot-grass (*Illecebrum verticillatum*.) Scarce, on marshy ground between Churchtown and Crossens.

Marsh Gentian (*Gentiana Pneumonanthe*.) A.

Autumnal Gentian (*Gentiana Amarella*.)

Field Gentian (*Gentiana campestris*.)

Both species very abundant about the sandhills.

Wild Celery (*Apium graveolens*.) A.

Wild Carrot (*Daucus carota*.)

Sea-side Carrot (*Daucus maritima*.)

Small Bur Parsley (*Caucalis daucoides*.) ?

Upright Hedge Parsley (*Torilis Anthriscus*.) Common in waste places.

Spreading Hedge Parsley (*Torilis infesta*.)

Knotted Hedge Parsley (*Torilis nodosa*.)

Cow Parsnip, or Hogweed (*Herachium Spondylium*.)

Common Wild Parsnip (*Pastinaca sativa*.)

Hemlock (*Conium maculatum*.) A.

Garden Angelica (*Angelica Archangelica*.) Sparingly on the moss near Halsall, far away from any house or garden. G.

Wild Angelica (*Angelica sylvestris*.) By the sides of water-courses, common.

Meadow Pepper Saxifrage (*Silaua pratensis*.)

Fools' Parsley (*Cethusa Cynapium*.) A very poisonous plant, not abundant.

Common Fennel (*Feniculum vulgaris*.) Sparingly found, and mostly in the vicinity of gardens.

Water Dropwort (*Enanthe fistulosa*.) Abundant in ditches and places occasionally overflowed.

Callous-fruited Water Dropwort (*Oenanthe pimpinelloides*.) W.

Hemlock Water Dropwort (*Oenanthe crocata*.) W.

Broad-leaved Water Dropwort (*Sium latifolium*)?

Procumbent Water Dropwort (*Sium nodiflorum*.)

Narrow-leaved Water Dropwort (*Sium angustifolium*.)

Least Water Dropwort (*Sium inundatum*.)

All the Dropworts are aquatics, and some kinds are very abundant in ditches, so much so that many of the water courses are quite choked with them, the broad and narrow-leaved are poisonous and all the others are to be suspected.

Earth-nut (*Bunium flexuosum*.) The tuberous root is eaten by children, and is greedily devoured by pigs.

Burnet Saxifrage (*Pimpinella Saxifraga*.)

Gout-weed, or Herb Gerarde (*Agopodium Podagraria*.) In damp situations, not uncommon.

Rough Chervil (*Charophyllum temulentum*.) Very abundant.

Wild Beaked Parsley (*Anthriscus sylvestris*.) In banks and hedges, very common.

Common Beaked Parsley (*Anthriscus vulgaris*.)

Shepherd's Needle, or Venus's Comb (*Scandix pecten*.) In cornfields and cultivated ground, abundant.

Common Alexanders (*Smyrniolum Olusatrum*)?

Sea Holly, or Sea Eringo (*Eryngium maritimum*.) Very abundant on the shore, and among the sandhills bordering, frequently attaining a large size; the root is sometimes bleached and forms a substitute for asparagus, and has been long used, when candied, as a sweetmeat.

White Rot, or Marsh Pennywort (*Hydrocotyle vulgaris*.)

Annual Sea-side Goosefoot (*Suaeda maritima*.)

Many-seeded Goosefoot (*Chenopodium polyspermum.*) ?

Ditto do. var. A. & B.

Good King Henry, or Mercury Goosefoot (*Chenopodium Bonus Henricus.*)

Red Goosefoot (*Chenopodium rubrum*) ?

Maple-leaved Goosefoot (*Chenopodium hybridum*) ?

Fig-leaved Goosefoot (*Chenopodium ficifolium*) ?

Oak-leaved Goosefoot (*Chenopodium glaucum*) ?

Many of the species are abundant in banks, hedges, &c., along the shores; those with large leaves are frequently used as pot-herbs, and as substitutes for spinach.

Prickly Saltwort (*Salsola Kali.*) Abundant on the shore.

Common Elder (*Sambucus nigra.*) In hedge rows.

Grass of Parnassus (*Parnassia palustris.*)

Parnassian grass, with chalice bloom,
And globes nectareous, like the earl's
Rich coronet, beset with pearls.

A very beautiful and highly interesting plant, most abundant in this neighbourhood, though not generally dispersed through the kingdom, and in many places quite unknown; the nectaries at the base of the petals are very beautiful microscopic objects.

Thrift, or Sea Gilliflower (*Armeria maritima.*) With white and red flowers, abundant.

Spreading Spiked Sea-Pink (*Statice Limonium.*) W.

Remote-flowered Sea-Pink (*Statice rariflora.*)

Narrow-leaved Pale Flax (*Linum angustifolium.*) On sandy banks along the shores, but not plentiful.

Purging Flax (*Linum catharticum.*) Very common.

Round-leaved Sun-dew (*Drosera rotundifolia.*)

Spathulate-leaved Sun-dew (*Drosera longifolia.*) On the mosses and about the meres.

Great Sun-dew (*Drosera Anglica.*) W.

Water Purslane (*Peplis Portula.*) Common in places occasionally overflowed.

Wild Hyacinth, or Blue-bell (*Agaphis nutans.*) In woods and shady places, common.

Broad-leaved Garlic (*Allium ursinum.*) W.

Star of Bethlehem (*Ornithogalum umbellatum.*) A.

Common Asparagus (*Asparagus officinale.*) Sparingly on the sea shore; not wild.

Lancashire Bog Asphodel (*Narthecium ossifragum.*)

Hard Rush (*Juncus glaucus.*)

Soft Rush (*Juncus effusus.*)

Common Rush (*Juncus conglomeratus.*)

Lesser Sharp Sea-Rush (*Juncus maritimus.*)

Sharp-flowered Jointed Rush (*Juncus acutiflorus.*)

Shining-fruited Jointed Rush (*Juncus lampocarpus.*)

Lesser Bog Jointed Rush (*Juncus uliginosus.*)

Toad Rush (*Juncus bufoneus.*)

Round-fruited Rush (*Juncus compressus.*) Var. *cænosus.* W.

Heath Rush (*Juncus squarrosus.*) The rushes are found in boggy places, some in salt marshes, and abound in all the mosses and meres.

Great Hairy Wood Rush (*Luzula sylvatica.*)

Broad-leaved Hairy Wood Rush (*Luzula pilosa.*)

Field Wood Rush (*Luzula campestris.*) The Wood Rushes are very common on the sandhills, they do not affect situations so near the sea as the true Rushes.

Great Water Dock (*Rumex Hydrolapathum.*)

Curled Dock (*Rumex crispus.*)

Bloody-veined Dock (*Rumex sanguineus.*)

Sharp Dock (*Rumex acutus.*)

Broad-leaved Dock (*Rumex obtusifolius.*)

Golden Dock (*Rumex maritimus.*)

Common Sorrel (*Rumex acetosa.*)

Sheep's Sorrel (*Rumex acetosella.*)

Both kinds of Sorrel are common, and are frequently used as salad.

Marsh Arrow-grass (*Triglochin palustre.*)

Sea-side Arrow-grass (*Triglochin maritimum.*)

Both kinds very common.

Greater Water Plantain (*Alisma Plantago.*) Abundant in ponds and ditches.

Lesser Water Plantain (*Alisma ranunculoides.*) Common in stagnant water.

Creeping Lesser Water Plantain. Var. B.

Common Maple (*Acer campestre.*) W.

Not indigenous.

Perfoliate Yellow-wort (*Chlora perfoliata.*) Very abundant.

An excellent bitter.

Cross-leaved Heath (*Erica tetralix.*)

Fine-leaved Heath (*Erica cineria.*)

Common Ling, or Heather (*Calluna vulgaris.*)

These three plants abound in all the mosses and meres.

Bilberry, or Whortleberry (*Vaccinium myrtillus.*)

Marsh Whortleberry, or Cranberry (*Vaccinium oxycoccus.*)

Evening Primrose (*Oenothera biennis.*) Grows all round Southport, particularly at Birkdale, but not indigenous.

Hairy Willow-herb, or Codlings and Cream (*Epilobium hirsutum.*) In most ditches and water-courses.

Small-flowered Willow-herb (*Epilobium parviflorum.*)

Broad Smooth-leaved Willow-herb (*Epilobium montanum.*)

Square-stalked Willow-herb (*Epilobium tetragonum.*)

Pale Smooth-leaved Willow-herb (*Epilobium roseum.*) G.

Narrow-leaved Marsh Willow-herb (*Epilobium palustre.*)

All the above are common, except the *roseum*.

Knot-grass (*Polygonum aviculare.*)

Robert's Knot-grass (*Polygonum Roberti.*)

"This, which we have long been acquainted with, grows abundantly on both sides of the Mersey, sometimes extending three or four feet in length."—G.

Buckwheat (*Polygonum Fagopyrum.*) The seed affords excellent food for poultry; it was probably originally introduced for agricultural purposes.

Climbing Buckwheat (*Polygonum Convolvulus.*) The seeds are smaller than the last, and are much sought after by small birds.

Amphibious Persicaria (*Polygonum amphibium.*)

Ditto ditto Var. A. and B.

All common on the sides of ponds, or floating on the surface.

Spotted Persicaria (*Polygonum Persicaria.*)

Pale-flowered Persicaria (*Polygonum Lapathifolium.*)

Small Creeping Persicaria (*Polygonum minus.*) Common on footpaths by the sides of watery places.

Biting Persicaria (*Polygonum Hydropiper.*) Very common in wet situations, and may be readily known by its pendant spikes of flowers.

Tuberous Moschatel (*Adoxa moschatellina.*) In banks and shady places abundant, diffusing a pleasant musky odour.

Flowering Rush, or Water Gladiole (*Butomus umbellatus*.)

This is one of the most showy of our native aquatics, and well deserves a place in all artificial waters.

Yellow Bird's-nest (*Monotropa Hypopithys*.) Abundant in marshy grounds, interspersed with dwarf willows.

Round-leaved Winter-green (*Pyrola rotundifolia*.) This, and the *Pyrola maritima* are met with in considerable abundance in the low marshy places among the sandhills from Birkdale to Formby, likewise at Lytham; it is a very local plant, and probably in no part of this kingdom is so abundant as in the places above named. It is so beautiful that it merits a place in every garden; it is of easy cultivation, growing in almost sheer sand with a little peat earth, and must be kept constantly moist.

Sea Winter-green (*Pyrola maritima*.)

Knawel (*Scleranthus annuus*.) A.

Opposite-leaved Golden Saxifrage (*Chrysosplenium oppositifolium*.) Frequent in watery places.

Common Soap-wort (*Saponaria officinalis*.) On banks, foot-paths, and roadsides round Southport; a double variety is cultivated in gardens.

Bladder Campion (*Silene inflata*.) Common on the shore.

Sea-Campion, or Catch-fly (*Silene maritima*.) This much resembles the last species, has larger flowers and smaller leaves, though frequently can scarcely be distinguished.

English Catch-fly (*Silene Anglica*.) In fields near the Ainsdale Station.

Night-flowering Catch-fly (*Silene noctiflora*.) In borders of fields and by the sides of the Railway from Birkdale to Crosby. G.

- Wood Stitch-wort (*Stellaria nemorum.*)
Common Chick-weed, or Stitch-wort (*Stellaria media.*)
Greater Stitch-wort (*Stellaria holostea.*)
Lesser Stitch-wort (*Stellaria graminea.*)
Glaucous Marsh Stitch-wort (*Stellaria glauca.*)
Bog Stitch-wort (*Stellaria uliginosa.*)
Water Mouse-eared Chick-weed (*Malachium aquaticum.*)
Sea-side Sand-wort (*Honckenga peploides.*)
Three-nerved Sand-wort (*Arenaria trinervis.*) 'Moist shady places, not uncommon.
Thyme-leaved Sand-wort (*Arenaria Serpillifolia.*) Dry places, frequent.
Purple Sand-wort (*Arenaria rubra.*)
Sea Spurry Sand-wort (*Arenaria spergularia.*) With the last species common on the sea-shore.
Marsh Andromeda (*Andromeda polifolia.*) W.
Wall Penny-wort (*Cotyledon umbilicus.*) Found sparingly about Scarisbrick and its vicinity.
Biting Stone-crop, or Wall Pepper (*Sedum acre.*) Abundant on the sand-hills.
English Stone-crop (*Sedum anglicum.*) A.
Wood Sorrel (*Oxalis acetosella.*) In woods and shady places.
Corn Cockle (*Agrostemma Githago.*)
Ragged Robin, or Cuckoo-flower (*Lychnis flos-ouculi.*)
Red and White Campion (*Lychnis dioica.*)
Red and White Campion. Var., B. Both varieties are abundant in banks and cornfields.
Broad-leaved Mouse-ear Chickweed (*Cerastium vulgatum.*)
Narrow-leaved Mouse-ear Chickweed (*Cerastium viscosum.*) G.
Little Mouse-ear Chickweed (*Cerastium semi-decandrum.*)

Four-cleft Mouse-ear Chickweed (*Cerastium tetrandrum*.)

These species are abundant in waste places, sides of fields, and on the sand-hills.

Field Chickweed (*Cerastium arvense*.) In fields and dry places.

Sea-side Sandwort-spurry (*Spergularia marina*.)

Corn Spurry (*Spergularia arvensis*.)

Knotted Spurry (*Spergularia nodosa*.) Common like the last, but affecting moister situations.

Awl-shaped Spurry (*Sagina subulata*.) In dry places.

Purple Loosestrife (*Lythrum salicaria*.) In moist ditches and fields round Southport.

Common Agrimony (*Agrimonia Eupatoria*.) Occasionally among the sand-hills.

Dyer's Rocket, or Yellow-weed (*Roseda luteola*.)

Shrubby-base Rocket (*Roseda fruticulosa*.)

White Rocket (*Roseda alba*.) This grows with the last species on the Southport shore, but has either been sown or is the outcast of gardens.

Common House-leek (*Sempervivum testorum*.) This species was formerly held in high estimation in rural pharmacy. The expressed juice of the leaves, mixed with milk, is often applied in cutaneous eruptions.

Wild Bullace (*Prunus communis*.) Occasionally in hedge-rows.

Blackthorn, or Sloe (*Prunus spinosa*.) Hedges, frequent.

Hawthorn, Whitethorn, or May (*Crataegus Oxyacantha*.) Abundant, sometimes with pink flowers.

Crab Apple (*Pyrus Malus*.) W.

Mountain Ash, or Rowan (*Pyrus aucuparia*.) W.

Meadow-sweet (*Spiraea ulmaria*.) In moist places.

Burnet-leaved Rose (*Rosa spinosissima*.) Common on many of the sand-hills.

Dog Rose (*Rosa canina*.)

Ditto. Var., A., B., Y., & D. Common in hedges, and borders of woods.

Downy-leaved Rose (*Rosa tomentosa*.) A.

Raspberry (*Rubus idæus*.) Found occasionally in waste places.

Common Bramble or Blackberry (*Rubus fruticosus*.) Very common.

Hazel-leaved Bramble (*Rubus corylifolius*.)

Dewberry (*Rubus cæsius*.) This species may be readily known from the foregoing by its constantly trailing on the ground; the fruit is larger, of a fine deep blue colour, and though large has fewer grains or seeds composing the berry.

Red-fruited Bramble (*Rubus suberectus*.) W.

Hornbeam-leaved Bramble (*Rubus carpinifolius*.) W.

Buckthorn-leaved Bramble (*Rubus rhamnifolius*.) W.

Large-leaved Bramble (*Rubus macrophyllus*.) W.

Koehler's Bramble (*Rubus Koehleri*.) W.

Wild Strawberry (*Fragaria vesca*.) Occasionally among the sand-hills, and abundantly on uncultivated ground between Birkdale and Ainsdale.

Purple Marsh Cinque-foil (*Comarum palustre*.) On boggy and marshy ground, abundant.

Silver-weed (*Potentilla anserina*.)

Hoary Cinque-foil (*Potentilla argentea*.)

Creeping Cinque-foil (*Potentilla reptans*.)

Strawberry-leaved Cinque-foil (*Potentilla fragariastrum*.) All the species are very common on banks, uncultivated places, and meadows.

Common Tormentil (*Potentilla officinalis.*)

Trailing Tormentil (*Potentilla Tormentilla.*) Both kinds very common.

Common Avens, or Herb Bennet (*Geum urbanum.*) In woody or shady places, not abundant.

Long Prickly-headed Poppy (*Papaver Argemone.*) Fields and waysides, common.

Round rough-headed Poppy (*Papaver hybridum.*) Scarce, G.

Common Red Poppy (*Papaver rhæas.*) Very common.

Long smooth-headed Poppy (*Papaver dubium.*) Common.

White Poppy (*Papaver somniferum.*) In waste places and on the shore, common.

Yellow Horned Poppy (*Glaucium luteum.*) Sparingly along the shore to Formby.

Common Celandine (*Chelidonium majus.*)

Common Celandine. Var., B.

Both kinds by road sides, in various places.

White Water Lily (*Nymphaea alba.*) Common in many of the pits and water-courses round Southport.

Yellow Water Lily (*Nuphar lutea.*) Abundant in most of the ditches and water-courses, intermixed with the preceding.

Greater Meadow-rue (*Thalictrum majus.*) Rare, in ponds about Scarisbrick.

Common Meadow-rue (*Thalictrum flavum.*) Plentiful near Martin Mere.

Wood Anemone (*Anemone nemorosa.*) Common in woods and shady places.

Water Crowfoot (*Ranunculus aquatilis.*) Common in all the ponds and pools round Southport.

Water Crowfoot. Var., B. and Y.

Ivy-leaved Crowfoot, (*Ranunculus hederaceus*.) In moist places subject to occasional inundation.

Great Spearwort (*Ranunculus lingua*.) This, the most showy of the British Ranunculi, is found in considerable abundance in ditches round Birkdale.

Lesser Spearwort (*Ranunculus flammula*.) Very common in wet places where water stagnates.

Pilewort Crowfoot, or lesser Celandine (*Ranunculus Ficaria*.)

Celery-leaved Crowfoot (*Ranunculus sceleratus*.)

Upright Meadow Crowfoot (*Ranunculus acris*.)

Creeping Crowfoot (*Ranunculus repens*.)

Bulbous Crowfoot (*Ranunculus bulbosus*.)

Pale Hairy Crowfoot (*Ranunculus hirsutus*.)

Small Flowered Crowfoot (*Ranunculus parviflorus*.) W.

The above species are found abundantly in fields and meadows, and are known by the popular name of Buttercups. All the kinds are acrid and highly poisonous, frequently blistering the mouths of cattle that inadvertently feed upon them.

Marsh Marigold (*Caltha palustris*.)

Marsh Marigold. Var., B.

Both kinds are abundantly met with in most wet meadows and by the sides of ditches.

Horse Mint (*Mentha sylvestris*.) G.

Round-leaved Mint (*Mentha rotundifolia*.) G.

Hairy Mint (*Mentha aquatica*.)

Tall Red Mint (*Mentha sativa*.) G.

Bushy Red Mint (*Mentha arvensis*.) G.

All the kinds are common in moist places.

- Wild Thyme (*Thymus serpyllum*.) Common on dry spots.
 Wood Germander, or Sage (*Teucrium scorodonia*.)
 Common Bugle (*Ajuga reptans*.) Abundant, and frequently
 with white flowers.
 Black Horehound (*Ballota nigra*.)
 Mother-wort (*Leonurus Cardiacæ*.) A.
 White Horehound (*Marrubium vulgare*.)
 Yellow Weazel-snout, or Archangel (*Galeobdolon luteum*.) In
 waste places about Scarisbrick.
 Red Hemp Nettle (*Galeopsis ladanum*.) Common, varying in
 colour from pale to deep red. G.
 Common Hemp Nettle (*Galeopsis Tetrahit*.) In fields, varying
 in colour like the preceding.
 Large-flowered Hemp Nettle (*Galeopsis versicolor*.) A.
 White Dead Nettle (*Lamium album*.)
 Purple Dead Nettle (*Lamium purpureum*.)
 Henbit Dead Nettle (*Lamium amplexicaule*.)
 Wood Betony (*Betonica officinalis*) W.
 Hedge Wound-wort (*Stachys sylvatica*.)
 Marsh Wound-wort (*Stachys palustris*. Common in moist and
 shady places.
 Corn Wound-wort (*Stachys arvensis*.) W.
 Ground Ivy (*Nepeta Glecoma*.) Abundant.
 Wild Basil (*Calamintha Clinopodium*.)
 Self-heal (*Prunella vulgaris*.)
 Self-heal, white flowered, var.
 Both kinds common round Southport.
 Common Scull-cap (*Scutellaria galericulata*.) On the mosses.
 Yellow Viscid Bartsia (*Bartsia viscosa*.)
 Red Bartsia (*Bartsia odontitis*.)

Eye-bright (*Euphrasia officinalis*.)

Common Rattle (*Rhinanthus crista-galli*.)

Large Bushy Rattle (*Rhinanthus major*.) G.

Both kinds very abundant.

Marsh Louse-wort, or Tall Red Rattle (*Pedicularis palustris*.)

Pasture Louse-wort, or Dwarf Red Rattle (*Pedicularis sylvatica*.) Abundant in marshy places.

Yellow Toad-flax (*Linaria vulgaris*.) Banks and hedges.

Knotted Fig-wort (*Scrophularia nodosa*.) W.

Water Fig-wort, or Water Betony (*Scrophularia aquatica*.)

Purple Foxglove (*Digitalis purpurea*.) Abundant.

Purple Sea Rocket (*Cakile maritima*.) On the shore.

Lesser Wart-Cress (*Senebiera coronopus*.) Occasionally in dry places, by roadsides. G.

Dyer's Woad (*Isatis tinctoria*.) About Birkdale, but scarcely indigenous.

Alpine Penny-Cress (*Thlaspi alpestre*.) Not common. G.

Shepherd's Purse (*Capsella bursa-pastoris*.)

Naked-stalked Teesdalia (*Teesdalia nudicaulis*.) Very abundant in sandy places round Birkdale.

Broad-leaved Pepper-wort (*Lepidium latifolium*.) G.

Mithridate Pepper-wort (*Lepidium campestre*.)

Smooth Pepper-wort (*Lepidium Smythii*.) Occasionally found in corn fields.

Common Scurvy-Grass (*Cochlearia officinalis*.) G.

English Scurvy-grass (*Cochlearia Anglica*.)

Danish Scurvy-grass (*Cochlearia Danica*.) All the kinds common on the shore and salt marshes.

Water Radish (*Armoracia amphibium*.)

Horse Radish (*Armoracia rusticana*.) Found occasionally, but probably the outcast of gardens.

- Common Whitlow-grass (*Draba verna*.) Very common.
- Rock Whitlow-grass (*Draba rupestris*.)? Very scarce, but sometimes met with on the sandhills about Formby.
- Sea-side Koniga (*Koniga maritima*.) Frequently found about Southport, but probably the outcast of gardens.
- Bitter Lady's-Smock (*Cardamine amara*.) Common in wet places.
- Meadow Lady's-Smock, or Cuckoo-flower (*Cardamine pratensis*) Very abundant, sometimes with purple flowers.
- Hairy Lady's-Smock (*Cardamine hirsuta*.)
- Fringed Rock-Cress (*Arabis ciliata*.)? On the shore, but very rare.
- Hairy Tower-Mustard (*Arabis hirsuta*.) Not common.
- Long-podded Tower-Mustard (*Turritis glabra*.) G.
- Bitter Winter-Cress, or Yellow Rocket (*Barbarea vulgaris*.)
- Water-Cress (*Nasturtium officinale*.) Very abundant.
- Creeping Nasturtium (*Nasturtium sylvestre*.) Sides of ditches, and places subject to inundation. G.
- Marsh Nasturtium (*Nasturtium terrestre*.) In similar places to the last species.
- Hedge-Mustard (*Sisymbrium officinale*.) Abundant.
- Fine-leaved Hedge-Mustard, or Flaxweed (*Sisymbrium Sophia*)
- Common Thale-Cress (*Sisymbrium Thalianum*.)
- Garlic Treacle Mustard, Jack by the Hedge, or Sauce Alone (*Alharia officinalis*.) Very common.
- Common Turnip (*Brasica Rapa*.)
- Wild Mustard, or Charlock (*Sinapis arvensis*.)
- White Mustard (*Sinapis alba*.) G.
- Common Mustard (*Sinapis nigra*.)
- Sand Mustard (*Sinapis muralis*.) Among the sandhills near the sea. G.

Wild Radish, or Jointed Charlock (*Raphanus Raphanistrum.*)

Hemlock Stork's-bill (*Erodium cicutarium.*)

Hemlock, with white flowers.

Both varieties very abundant.

Bloody Crane's-bill (*Geranium sanguineum.*) Occasionally among the sandhills.

Strong-scented Crane's-bill, or Herb Robert (*Geranium robertianum.*)

Strong-scented Crane's-bill, or Herb Robert, white variety.

Dove's-foot Crane's-bill (*Geranium molle.*)

Round-leaved Crane's-bill (*Geranium rotundifolium.*) Not common. G.

Small-flowered Crane's-bill (*Geranium pusillum.*) Occasionally found, but not abundant. G.

Jagged-leaved Crane's-bill (*Geranium dissectum.*)

Long-stalked Crane's-bill (*Geranium columbinum.*)

Common Mallow (*Malva sylvestris.*)

Dwarf Mallow (*Malva rotundifolia.*)

Musk Mallow (*Malva moschata.*)

Musk Mallow, white variety.

Both varieties common on banks and hedge-rows, about Crossens.

White Climbing Corydalis (*Corydalis claviculata.*)

Ramping Fumitory (*Fumaria capriolata.*)

Common Fumitory (*Fumaria officinalis.*)

Common Fumitory. Var. A. and B.

All the varieties are common in waste and barren spots.

Common Milk-wort (*Polygala vulgaris.*)

Common Milk-wort, with purple, pink, and white varieties.

Furze, Whin, or Gorse (*Ulex europæus.*)

Dwarf Furze (*Ulex nanus*.) Abundant on the mosses about Halsall.

Hairy Green-weed (*Genista Anglica*.) Common on the sides of water-courses about Martin Mere, Crossens, and Banks.

Common Broom (*Sarothamnus scoparius*.)

Common Rest Harrow (*Ononis arvensis*.)

Rest Harrow. Var. *procurrens* and *spinosa*.

The common kind is very abundant, and is often interspersed with the other varieties.

Kidney-Vetch, or Lady's Finger (*Anthyllis vulneraria*.)

Bitter Vetch (*Orobus tuberosa*.)

Rough-podded Vetchling (*Lathyrus hirsutus*.) Scarce, but is occasionally found between Southport and Scarisbrick. G.

Meadow Vetchling (*Lathyrus pratensis*.)

Tufted Vetch (*Vicia oracca*.)

Common Vetch (*Vicia sativa*.) Sides of fields and footpaths.

Narrow-leaved Crimson Vetch (*Vicia angustifolia*.)

Spring Vetch (*Vicia lathyroides*.) Not plentiful, but occasionally found by waysides.

Hairy Tine-Tare (*Vicia hirsuta*.)

Smooth Tine-Tare (*Vicia tetrasperma*.)

Bush Vetch (*Vicia sepium*.) W.

Common Birdsfoot (*Ornithopus purpusillus*.)

Saint-foin (*Onobrychis sativa*.) Abundant on some of the sand-hills north and south of the town.

Yellow Melilot (*Melilotus officinalis*.)

White-flowered Melilot (*Melilotus leucantha*.) Both kinds abundant by the road-sides, from Crossens to Banks.

Bird's-foot Trefoil (*Trigonella ornithopodioides*.) G.

White Trefoil, or Dutch Clover (*Trifolium repens*.)

Subterraneous Trefoil (*Trifolium subterraneum*.) This species acquires its name from the seed vessel after the flowering is past burying itself in the soil, where the seeds often vegetate whilst adhering to the parent plant. Is sparingly found, mostly in dry elevated situations. G.

Sulphur-coloured Trefoil (*Trifolium ohroleucum*.) Only occasionally to be met with on the shore, growing on dry sand. G.

Common Purple Trefoil, or Clover (*Trifolium pratense*.)

Zig-zag Trefoil (*Trifolium medium*.) Very abundant; may be known from the preceding by its long narrow leaves, and zig-zag mode of growth.

Hare's-foot Trefoil (*Trifolium arvense*.)

Suffocated Trefoil (*Trifolium suffocatum*.) G.

Strawberry Trefoil (*Trifolium fragiferum*.)

Hop Trefoil (*Trifolium procumbens*.)

Lesser Yellow Trefoil (*Trifolium filiforme*.) G.

Bird's-foot Trefoil (*Lotus corniculatus*.) Very abundant.

Slender Bird's-foot Trefoil (*Lotus tenuis*.) G.

Greater Bird's-foot Trefoil (*Lotus major*.) Common, growing very large by the sides of watery places.

Black Medick, or Nonsuch (*Medicago lupulina*.)

Spotted Medick (*Medicago maculata*.)

Both frequent.

Square-staked St. John's Wort (*Hypericum quadrangulum*.)

By the sides of ditches.

Perforated St. John's Wort (*Hypericum perforatum*.) On banks and shady places; it obtains its name not from being perforated, but from being covered all over with pellucid spots which give it the appearance of being so.

Imperforate St. John's Wort (*Hypericum dubium.*) Not uncommon, but less plentiful than the preceding.

Small Upright St. John's Wort (*Hypericum pulchrum.*) On banks.

Trailing St. John's Wort (*Hypericum humifusum.*)

Marsh St. John's Wort (*Hypericum elodes.*) Common in Martin Mere, and on the mosses about Scarisbrick and Halsall.

Yellow Goat's-beard (*Tragopogon pratensis.*)

Bristly Ox-tongue (*Helminthia echinoides.*) Occasionally found by the sides of the railway from Ainsdale to Formby. G.

Tall Marsh Sow-Thistle (*Sonchus palustris.*) In fields that have been reclaimed from the bogs or meres; not abundant. G.

Corn Sow-Thistle (*Sonchus arvensis.*)

Common Sow-Thistle (*Sonchus oleraceus.*) Very common.

Strong-scented Lettuce (*Lactuca virosa.*) G.

Ivy-leaved Wall Lettuce (*Lactuca muralis.*) On the skirts of woods and plantations, sometimes on old walls, not abundant.

Common Dandelion (*Leontodon Taraxacum.*)

Marsh Dandelion (*Leontodon palustre.*)

Rough Hawk-bit (*Apargia hispida.*) Abundant on banks and dry places.

Dandelion Hawk-bit (*Apargia autumnalis.*) Occasionally found on the sandhills.

Hairy Thrincia (*Thrincia hirta.*) On sandhills and in peaty fields.

Mouse-ear Hawk-weed (*Hieracium pilosella.*)

Narrow-leaved Hawk-weed (*Hieracium umbellatum.*)

Shrubby Broad-leaved Hawk-weed (*Hieracium boreale*.) Not unfrequent in plantations and uncultivated grounds.

Smooth Hawk's-beard (*Crepis virens*.)

Spotted Cat's-ear (*Hypochaeris maculata*.) On the sandhills. G.

Smooth Cat's-ear (*Hypochaeris glabra*.) Not unfrequent. G.

Long-rooted Cat's-ear (*Hypochaeris radicata*.)

Common Nipple-wort (*Lapsana communis*.)

Wild Succory, or Chicory (*Cichorium Intybus*.) Very common in the south of England; was introduced here some years ago at what obtained the name of the Chicory Farm, on the Scarisbrick road, and though it has ceased to be cultivated for commercial purposes, it is still to be found in the vicinity.

Common Burdock (*Arotium Lappa*.)

Common Burdock. Var. B.

Both varieties are very common.

Musk Thistle (*Carduus nutans*.) Very abundant in places where bricks were burnt, in the Scarisbrick road.

Wetted Thistle (*Carduus acanthoides*.)

Slender-flowered Thistle (*Carduus tenuiflorus*.) Very common, with white and purple flowers.

Milk Thistle (*Carduus marianus*.) Found sparingly round Southport.

Spear Plume Thistle (*Cnicus lanceolatus*.)

Marsh Plume Thistle (*Cnicus palustris*.)

Creeping Plume Thistle (*Cnicus arvensis*.) Abundant in meadows and fields, where it is a great pest to the agriculturist.

Woolly-headed Plume Thistle (*Cnicus eriophorus*.) Sometimes found in barren, uncultivated places, but not common. G.

Meadow Plume Thistle (*Cnicus pratensis*.) Common on wet boggy places that are often overflowed, as Martin Mere, and similar situations. G.

Common Cotton Thistle (*Onopordum Acanthium*.) Occasionally to be met with, but not common. G.

Carline Thistle (*Carlina vulgaris*.)

Nodding Bur-Marigold (*Bidens cernua*.)

Trifid Bur-Marigold (*Bidens tripartita*.)

Both species very common by the sides of ditches and water-courses.

Field Southernwood (*Artemisia campestris*.) In sandy fields; rare. G.

Sea Wormwood (*Artemisia maritima*.) Very abundant.

Common Wormwood (*Artemisia Absinthium*.)

Mug-wort (*Artemisia vulgaris*.)

Marsh Cudweed (*Gnaphalium uliginosum*.)

Least Cudweed (*Filago minima*.) Dry sandy places; common.

Narrow-leaved Cudweed (*Filago Gallica*.) Sandy places, on banks between Churchtown and Crossens. G.

Common Cudweed (*Filago Germanica*.) On barren places where the turf has been removed, and road sides; common.

Blue Flea-bane (*Erigeron acris*.)

Butter-bur (*Petasites vulgaris*.) Common by the sides of streams, and in fields that have been reclaimed from bogs.

Coltsfoot (*Tussilago Farfara*.)

Common Groundsel (*Senecio vulgaris*.)

Stinking Groundsel (*Senecio viscosus*.) G.

Mountain Groundsel (*Senecio sylvaticus*.) On dry places in the sandhills.

Hoary Rag-wort (*Senecio tenuifolius.*)

Common Rag-wort (*Senecio Jacobæa.*)

Marsh Rag-wort (*Senecio aquaticus.*)

Sea Starwort (*Aster Tripolium.*)

Golden Rod (*Solidago Virgaurea.*) Frequent in uncultivated places and neglected fields.

Common Flea-bane (*Pulicaria dysenterica.*)

Common Daisy (*Bellis perennis.*)

On waste and woodland, rock and plain,
Its humble buds unheeded rise;
The Rose has but a summer's reign,
The DAISY never dies.

Great White Ox-eye (*Chrysanthemum leucanthemum.*)

Corn Marigold, or Yellow Ox-eye (*Chrysanthemum segetum.*)

Abundant in uncultivated fields.

Common Feverfew (*Matricaria Parthenium.*)

Corn Feverfew (*Matricaria inodora.*)

Wild Chamomile (*Matricaria Chamomilla.*) Found occasionally.

Corn Chamomile (*Anthemis arvensis.*) In fields and waysides ;
not frequent.

Stinking Chamomile, or May-weed (*Anthemis Cotula.*)

Ox-eye Chamomile (*Anthemis tinctoria.*) G.

Sneeze-wort Yarrow (*Achillea ptarmica.*) Abundant in wet places.

Common Yarrow, or Milfoil (*Achillea millefolium.*)

Brown Knap-weed (*Centaurea jacea.*) Scarce. G.

Black Knap-weed (*Centaurea nigra.*)

Corn Blue-bottle (*Centaurea Cyanus.*)

Greater Knap-weed (*Centaurea scabiosa.*) Barren places, road sides, and uncultivated places ; common.

Star Thistle (*Centaurea calceitrapa*.) Found occasionally about Scarisbrick, also by the shore from Crossens to Banks. G.

Green-winged Meadow Orchis (*Orchis Morio*.)

Early Purple Orchis (*Orchis mascula*.)

Marsh Orchis (*Orchis latifolia*.) Very abundant in all the damp places about the sandhills, varying in colour from white to a deep purple.

Spotted Palmate Orchis (*Orchis maculata*.) Common; in great variety of colour.

Fragrant Gymnadenia (*Gymnadenia conopsea*.) The only place where this beautiful plant has been met with, is in a field near the Ash Tree, where it was found by James Glover, Esq. G.

Green, or Frog Habenaria (*Habenaria viridis*.) Rare. G.

Butterfly Habenaria (*Habenaria bifolia*.) Very abundant in moist spongy bogs, Martin Mere, and the mosses about Scarisbrick.

Fragrant Lady's Tresses (*Neottia spiralis*.) This elegant little plant is found in considerable abundance, growing on the slopes of hillocks between Southport and Birkdale; it often does not make its appearance for two or three consecutive years, and then it is met with in great profusion. It had scarcely been found for the preceding three years, and last autumn dozens might have been gathered within a few yards. Its scent is very fine, and in warm close evenings may be called powerful; it is easy of cultivation, requiring less water than most of its congeners.

Common Twayblade (*Listera ovata*.)

Broad-leaved Heleborine (*Epipactis latifolia*.) Found in the same places, but less abundant than the following species.

Marsh Heleborine (*Epipactis palustris*.) Abundant in all the marshy places around Southport; it varies in colour from sullied white to a deep purple, and from two or three inches in height to a foot.

Sun Spurge (*Euphorbia helioscopia*.)

Sea Spurge (*Euphorbia paralia*.) Abundant on the shore and on the hills round Birkdale.

Portland Spurge (*Euphorbia portlandica*.) Found in the same localities and in equal quantities with the last species.

Petty Spurge (*Euphorbia peplus*.)

Wood Spurge (*Euphorbia Amygdaloides*.) Rare; in plantations both north and south of the town. G.

Water Star-wort (*Callitriche verna*.)

Water Star-wort (*Callitriche autumnalis*.)

Both kinds abundant in streams and water-courses.

Horned Pond-weed (*Zannichellia palustris*.)

Grass-wrack (*Zostera marina*.) This is found at times in large quantities on the shore, but evidently not growing in the vicinity. It mostly appears after strong westerly winds, and is probably brought from the Isle of Man, on the north and east of which it is very abundant.

Great Cat's-tail, or Reed-mace (*Typha latifolia*.) Abundant in ponds and slow streams.

Lesser Cat's-tail, or Reed-mace (*Typha angustifolia*.)

Branched Bur-Reed (*Sparganium ramosum*.)

Unbranched Bur-Reed (*Sparganium simplex*.) Common, but less abundant than the preceding.

Curved Carex (*Carex incurva*.) On all the low meadows, particularly about Birkdale. G.

- Sea Carex (*Carex arenaria.*)
Soft Brown Carex (*Carex intermedia.*)
Little Prickly Carex (*Carex stellulata.*)
Oval-spiked Carex (*Carex ovalis.*) In bogs; abundant. G.
Axillary Clustered Carex (*Carex axillaris.*) Occasionally in
bogs and wet places, but not common.
Mud Carex (*Carex limosa.*) ?
Cyperus-like Carex (*Carex Pseudo-cyperus.*) Abundant in
most streams round Southport.
Pale Carex (*Carex palescens.*)
Yellow Carex (*Carex flava.*)
Oederian Carex (*Carex Oederi.*)
Tawny Carex (*Carex fulva.*) G.
Vernal Carex (*Carex precox.*)
Glaucous Heath Carex (*Carex recurva.*)
Slender-beaked Bottle Carex (*Carex ampullacea.*)
Creeping Separate-headed Carex (*Carex divica.*) W.
Flea Carex (*Carex pulicaris.*) W.
White Carex (*Carex curta.*) W.
Distant-spiked Carex (*Carex remota.*) W.
Great Carex (*Carex vulpina.*) W.
Great-panicled Carex (*Carex paniculata.*) W.
Common Carex (*Carex Goodenovii.*) W.
Long-bracteated Carex (*Carex extensa.*) W.
Loose Carex (*Carex distans.*) W.
Pink-leaved Carex (*Carex panicea.*) W.
Pendulous Wood Carex (*Carex sylvatica.*) W.
Great Pendulous Carex (*Carex pendula.*) W.
Round-headed Carex (*Carex pilulifera.*) W. :

Hairy Carex (*Carex hirta.*) W.

Lesser Common Carex (*Carex paludosa.*) W.

The Carices generally affect wet situations, and are to be found abundantly in most of the bogs and marshy places around Southport, as also on the shore and low sandhills bordering the shore.

Plantain Shore-weed (*Littorella lacustris.*)

Common Alder (*Alnus glutinosa.*)

Small Stinging Nettle (*Urtica urens.*)

Great Stinging Nettle (*Urtica dioica.*)

Roman Nettle (*Urtica pilulifera.*) A.

Common Horn-wort (*Ceratophyllum demersum.*)

Unarmed Horn-wort (*Ceratophyllum submersum.*)

Spiked Water Milfoil (*Myriophyllum spicatum.*)

Whorled Water Milfoil (*Myriophyllum verticillatum.*)

Both species are occasionally found in stagnant waters.

Spotted Arum (*Arum maculatum.*) A.

Salad-Burnet (*Poterium Sanguisorba.*)

In moist meadows and reclaimed fields.

Common British Oak (*Quercus Robur.*)

Sessile-fruited Oak (*Quercus sessiliflora.*)

Beech (*Fagus sylvatica.*)

Chesnut (*Castanea vulgaris.*)

Common Birch (*Betula alba.*)

Hornbeam (*Carpinus Betulus.*)

The forest trees in this list are not to be found here wild; but with scarcely an exception are in a state of cultivation. The Crab Apple and the Mountain Ash are common in plantations; but cannot be considered as natives of Southport.

Common Hazel-Nut (*Corylus Avellana.*)

Hedges and coppices.

Almond-leaved Willow (*Salix amygdalina.*)

Crack Willow (*Salix fragilis.*)

Common White Willow (*Salix alba.*)

Downy Mountain Willow (*Salix arenaria.*)

“To name the uses of the WILLOW tribes
Were useless task. The baskets various forms
For various purposes of household thrift;
The wicker-chair of size and shape antique;
The rocking couch of sleeping infancy;
These, with unnumbered other forms and kinds,
Give bread to hands unfit for other work.”

GRAHAME.

Sweet Gale, or Dutch Myrtle (*Myrica gale.*) On the mosses,
and abundantly about Halsall and Martin Mere.

Hop (*Humulus Lupulus.*) Common in hedge rows.

Black Bryony (*Tamus communis.*) Abundant in hedge rows.

Great White Poplar (*Populus alba.*)

Aspen (*Populus tremula.*)

Black Poplar (*Populus nigra.*)

Perennial or Dog's Mercury (*Mercurialis perennis.*)

Common Frog-bit (*Hydrocharis Morsus-Rana.*)

Spreading Halberd-leaved Orache (*Atriplex patula.*)

Spreading Narrow-leaved Orache (*Atriplex angustifolia.*)

Both kinds very abundant in waste places.

Grass-leaved Sea Orache (*Atriplex littoralis.*)

Spreading-fruited Orache (*Atriplex rosea.*) W.

Common Polypody (*Polypodium vulgare.*) On banks, trunks
of trees, and old walls; common.

Male Shield Fern (*Aspidium filix-mas.*) Common on banks,
and in woods and coppices.

Prickly-toothed Shield Fern (*Aspidium spinulosum.*)

Spreading-leaved Shield Fern (*Aspidium dilatatum.*)

Lady Fern, or Female Spleen-wort (*Asplenium filix-femina.*)

Where the copsewood is the greenest,
Where the fountain glistens sheenest,
Where the morning dew lies longest,
There the LADY-FERN grows strongest.

All these species are often found growing together on banks, particularly on the shady sides of ditches and cuttings through the mosses. They abound in the vicinity of Martin Mere, Scarisbrick, and Halsall.

Common Brake, or Bracken (*Pteris aquilina.*)

Hard Fern (*Blechnum boreale.*) On banks about Formby and Altcar.

Osmund-Royal, or Flowering Fern (*Osmunda regalis.*) Grows abundantly on the sides of cuttings through the mosses, and by the road side from Southport to Scarisbrick, and largely in the mosses about Halsall.

Common Moon-wort (*Botrychium Lunaria.*)

Adder's-tongue (*Ophioglossum vulgatum.*)

Lesser Alpine Club-moss (*Lycopodium selaginoides.*)

Corn Horse-tail (*Equisetum arvense.*)

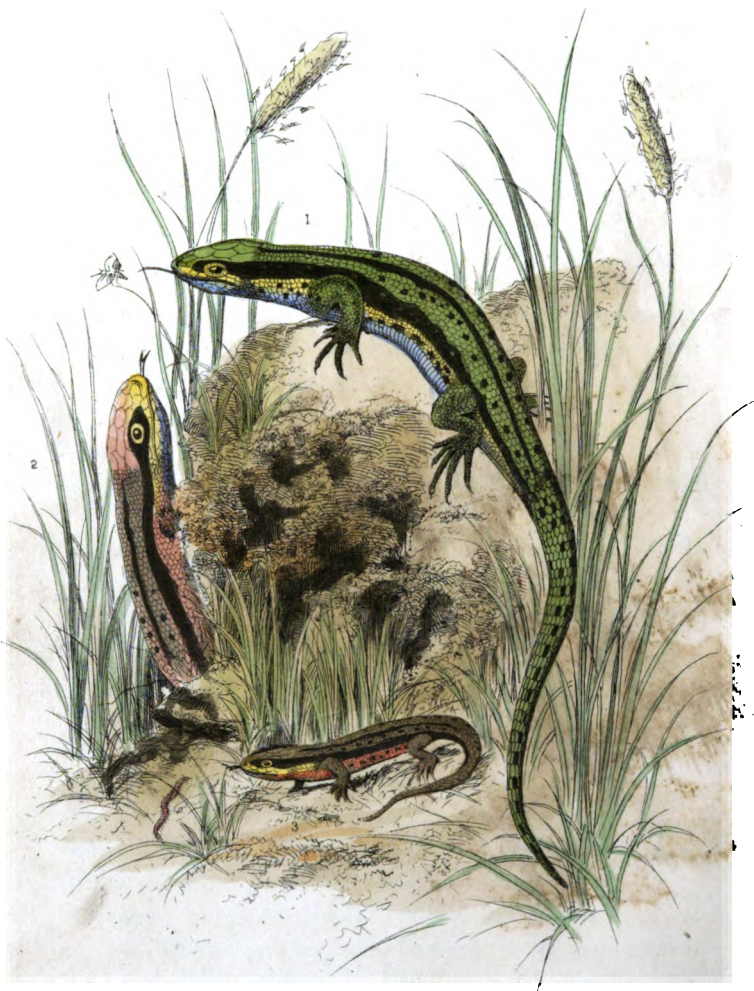
Smooth Naked Horse-tail (*Equisetum limosum.*)

Marsh Horsetail (*Equisetum palustre.*)

Rough Horsetail (*Equisetum hyemale.*) G.

Variegated Rough Horse-tail (*Equisetum variegatum.*)

All these species are found in moist places; some grow in deep water, sending their long roots far into the mud; others possess so much flint in their composition that they are used for polishing both wood and metal.



1. NETTLE LIZARD
(*Lacerta Agilis*.)

2. D♀ FEMALE.
(*Lacerta Agilis*.)

COMMON EFT.
(*Lacerta Vulgaris*.)

CHAPTER IX.

REPTILES OF SOUTHPORT.

CONSIDERABLE obscurity prevails as to the species found in this locality. They have usually been considered to consist of the Common Frog, the Natterjack Toad, the Common or Nimble Lizard, and the Common Smooth Newt. Having paid some attention to this interesting family, we find one whose habits are quite at variance with its form. It resembles the Brown Sand Lizard, but we have never met with it but in water, and that of considerable depth. One now before us was captured about the middle of March, and has been confined in a large decanter containing a considerable quantity of water, some Water Moss being in the bottle. It seldom quits the water entirely, but is constantly swimming about; its toes are very long, and are perfectly free from any appearance of web; in swimming the tail is the propelling power, and it progresses with astonishing rapidity. We have met with four specimens this year (1859); but have no doubt it is to be found in other situations where the local circumstances are similar, having only seen them in water-courses that are cut through *peat-moss*. The one we possess

readily takes insects put into its prison. It makes its appearance the earliest of our native species. Its length is rather more than six inches, of which the tail formed fully half; we may add that its tail was accidentally detached, but is now in progress of being reproduced. We are not yet in a position to name it from so short an acquaintance.

Since the accompanying plate was printed and coloured, we have complied with the wishes of some of our friends in altering the names of the species figured 1 and 2 on the plate, which have been changed to *Zootoca vivipara*, Nimble Lizard. The Sand Lizard is *Lacerta Agilis*, and that figured 3 is now called *Lissotriton punctatus*, Common Newt; this varies much in size from that represented on the plate, to four inches or more in length.

REPTILES.

Common Frog (*Rana temporaria*.) The Frog is too well known to need description; the species varies greatly in colour, from a bright olive yellow to almost black. We have met with one on Martin Mere, of a most brilliant mahogany colour; it had more the habit of the Common Toad, but as it leaped in the manner of the Frog, conclude it must be of the same kind, but from accidental circumstances had assumed a different aspect. The Frog deposits its spawn in large jelly-like masses; its young in the tadpole state are produced early in the year, but the time of their quitting the egg is deferred or accelerated by the cold or warmth of the season; as they appear, many are greedily devoured by Newts, large aquatic beetles, and even by full-grown Frogs.

Common Toad (*Bufo vulgaris*.) This is less numerous than the following species; it frequents gardens and dark shady places; its aspect is by no means agreeable, but it is quite harmless, is easily tamed, and soon feeds from the hand. Its spawn is deposited in long strings or chains, usually two lines together, of several feet in length, and like the tadpole of the Frog is dependent on the temperature of the season for the time of its development. It feeds on slugs, worms, and winged insects, particularly bees and wasps; in very dry seasons we have known it almost bury itself in sand, in which it scrapes a hole, and having got into it, draws the sand around it so as to be almost hidden. It is commonly found alone, whilst the next species is usually met with in companies.

Natterjack Toad (*Bufo calamita*.) Readily distinguished from the Common Toad by its active movements. It is of a brighter colour, with a distinct yellow line along the back; the female is generally larger and of paler colour, with spots more clearly defined than in the other sex. These are not only numerous in fresh water pools and ditches, but also in plashy places within the influx of the sea; that such circumstances are not unusual or accidental is clear from the quantities of spawn found with them, frequently several yards in length. The spawn is found from about the middle of April to the end of May. The development of the young depends on the temperature of the weather; they are very noisy, and when congregated in large numbers their loud croaking may be heard to a great distance.

Sand Lizard (*Lacerta agilis*.) A beautiful species, and more often met with than the following kind. It makes its appearance earlier than the Common Lizard; we met with two on the Birkdale sandhills about the middle of April, but have not yet seen any of the common kind this year.

Nimble Lizard, Viviparous or Common Lizard (*Zootoca vivipara*.) This is a very brilliant species; during dry and warm weather it is to be found on most of the sandhills round Southport; it bears a great degree of heat, we have known it basking in the sun reclining on a stone which was so hot as to be quite uncomfortable to touch. It is very voracious, and some we had in confinement devoured their fellow-prisoners. Worms and slugs are its common food, and we have often seen it spring up and catch a passing insect; it is easily tamed, and will then take flies or worms from the hand.

Warty or Rough-backed Water Newt (*Triton palustris*.) Is common on most of the marshes, and may be easily known by its dark, almost black, colour; feeds greedily on water insects and the tadpoles of the Frog and Toad.

Common Smooth Newt (*Lissotriton punctatus*.) Frequent under stones and in damp cellars and out-houses; is sluggish in its movements; its food small worms and slugs.

CHAPTER X.

MARINE, LAND, AND FRESH WATER SHELLS.

So FEW Sea Shells are truly natives of this locality, that the list is little more than an enumeration of the various kinds at times thrown on our shore. After high winds, species are frequently found here that are natives of the other side of the Atlantic; we only consider such truly aborigines as contain the living animal. The most certain method of becoming practically acquainted with the shell and its inhabitant, is to follow the receding tide, or to examine the nets of the shrimpers. The most satisfactory plan, however, is by dredging at varying distances from the shore. To prepare good specimens and destroy the living animal rapidly, boiling *fresh* water should be poured over them, which destroys life instantly in the univalves; the bivalves require sometimes to be boiled for a few minutes, when the animal can be easily removed.

The same methods may be pursued with the land and fresh water species; only, when practicable, to substitute *sea* for fresh water. Most of the latter kinds have very fragile shells, and it requires practice and some tact to extricate the animal from the shell without injuring it; for the smaller species we

have found the most convenient instrument to be a very fine crochet needle. To procure the fresh water kinds, a very finely pierced colander attached to a long stick is a very convenient implement; it is better to have the perforated part of brass, as not so liable to fill up from rust. Of whatever material, it should be kept perfectly clean and dry; the collector should be furnished with some wide-mouthed bottles or jars, as also with a few small boxes, to accompany him on his rambles.

MARINE SHELLS.

Aclis supranitida.

Anomia ephippium.

Anomia aculeata. B.

Aporrhais Pes Pelicani.

Arion amplicorum. B.

Artemis linct. B.

Artemis exoleta. B.

Buccinum undatum. R.

Cardium edule (Common Cockle.) This may be considered as one of the staple productions of Southport; the quantities that are caught are almost beyond belief, as almost daily some tons are sent away by the railways, besides those consumed here and in the neighbouring villages.

Cardium rusticum.

Cardium aculeatum.

Ceratisolen legumen.

Chemnitzia elegans.

Corbula nucleus.

Cylichna cylindracea.

Cylichna obtusa.

Cylichna truncata.

Cypræa Europæa.

Cyprina Islandica.

Crenella discors.

Dentalium entalis.

Donax anatinus.

Emarginula reticulata.

Eulima subulata.

Fusus antiquus.

Fusus Islandicus.

Lucinopsis undata.

Lacuna vineta.

Mangelia gracilis.

Mangelia nebula. B.

Maestra solida.

Maestra stultorum.

Maestra subtruncata.

Modiola Modiolus.

Montacuta bidentata.

Montacuta ferruginosa.

Murex erinaceus.

Mya truncata. These are frequently to be found at very low water, with the living animal and the curious large trunk attached.

Mya arenaria.

Natica monilifera.

Natica Montagui. B.

Natica nitida. B.

The *Naticas* deposit their spawn on a broadish band, which is left free on the sand, and forms a beautiful object for the microscope.

Nassa inorassata.

Nucula nucleus.

Odostomia interstincta. B.

Odostomia cylindrica. B.

Ostrea edulis.

Pecten opercularis.

Pecten varius.

Pecten maximus (Scalop.)

Philine aperta.

Pholas candida. Found at low water, with the animal alive.

J. G.

Psammobia Ferröensis.

Pileopsis Hungaricus.

Patella vulgata. B.

Pisidium amnicum. B.

Pisidium nitidum. B.

Pisidium pusillum. B.

Rissoa ulæ.

Rissoa parva.

Rissoa ventricosa. B.

Rissoa vitrea. B.

Rissoa striata. B.

Saxicava rugosa.

Scalaria communis.

Scalaria Turtonis.

Serpularia spirorbis.

Scrobicularia piperata,

Solen ensis.

Solen emarginatus.

Solen siliqua.

Syndosmya alba.
Scaphander lignarius.
Sepia officinalis. B.
Tellina fabula.
Tellina tenuis.
Tellina solidula.
Tellina donacina.
Thracia phascolina.
Thracia convexa.
Tornatella fasciata.
Trochus ziziphinus.
Trochus umbilicatus.
Trochus cinerareus.
Turritella communis.
Tapes pullastra. B.
Venus striatula.
Venus fasciata.
Velutina lævigata.
Zonites nitidulus.
Balanus communis.
Balanus ovularis.
Lepas anatifera.

LAND AND FRESH WATER SHELLS.

Cyclas cornea (Horny Cycle.) In ditches and watercourses, but never numerous.
Anodonta cygnea (Swan Fresh Water Mussel.) Found in streams and deep cuttings running to Crossens.
Paludina vivipara (Common Marsh Shell.) In some of the deepest cuttings in the vicinity of Scarisbrick and Martin Mere.

- Paludina Listeri*. Found in the same localities as the last, but less frequent. J. G.
- Bithinia tentaculata* (Tentacled Bithnia.) Common in ditches and stagnant waters. J. G.
- Valvata piscinalis*. J. G.
- Valvata cristata*. R.
- Helix aspersa*. (Common Garden Snail.)
- Helix nemoralis*. Abundant in marshy places among the sandhills.
- Carychium minimum*. Among moss and leaves.
- Clausilia nigricans*. Common under stones.
- Zua lubrica*. Under stones, and among leaves and moss. J. G.
- Succinea putris*. Common in ditches.
- Succinea oblonga*. Found with, but less common than the preceding. G.
- Physa fontinalis*. In running streams, usually on aquatic plants.
- Physa Hypnorum*. Ponds and slow streams.
- Pupa muscorum*. B.
- Pupa edentula*. B.
- Planorbis alba*. Stagnant water. R.
- Planorbis vortex*. In stagnant water; common. J. G.
- Planorbis contortus*. Ditches. J. G.
- Limneus stagnalis*. Common in ditches and stagnant water.
- Limneus palustris*. Common with the last.
- Limneus pereger*. A very abundant species, to be found in most ditches and stagnant waters, varies greatly in size and colour.
- Ancylus fluviatilis*. In streams, not common.
- Limax flavus*.

Limax cinereus.

Limax agrestis.

Our three species of *Limax* or Slug, though commonly considered as shellless animals, are each furnished with a small shell or shield situated on the upper part of the head, but beneath the skin; they all affect damp and shady places, and are mostly nocturnal, they vary considerably in colour, which has led to the species being unnecessarily multiplied.

CRUSTACEA.

Pinnotheres pisum. Found in *Macra stultorum*. J. G.

Pinnotheres varians. Found in the same. J. G.

Corystes Cassivelaunus (Masked Crab.) J. G.

Hyas coarctatus.

Crangon vulgaris (the Common Shrimp.)

Pagurus streblonix (Hermit Crab.) At low water, almost every Whelk and *Natica* shell left by the tide is tenanted by one or other species of Hermit Crab. G.

Pandalus annulicornis (Prawn.) J. G.

Portumnus variegatus. J. G.

Macropodia phalangium (Spider Crab.) J. G.

Nephrops Norvegicus. J. G.

Pychnogonum littorale. A suctorial crustacean. J. G.

STARFISHES AND ECHINIDS.

Ophiura texturata (Common Sand Star.) J. G.

Uraster rubens (Common Crossfish.) J. G.

Solaster papposa (Common Sun Star.)

Asterias aurantiaca (Butthorn.) J. G.

Echinus sphaera (Common Egg Urchin.) Common on the shore at low water.

Amphidotus cordatus (Heart Urchin.) This species burrows in the sand during the subsiding of the tide; its place of retreat is indicated by a depression of the sand, and is readily obtained by means of a spade: when alive, it is of a beautiful light straw colour, but soon changes on exposure to the air.

CHAPTER XI.

And here were coral bowers,
And grotts' of madrepores,
And banks of sponge, as soft and fair to eye
As e'er was mossy bed
Whereon the wood-nymphs lie
With languid limbs in summer's sultry hours.

SOUTHEY.

ZOOPHYTES OF SOUTHPORT.

Tubular Coralline (*Tubularia indivisa*.) This curious species inhabits deep water, and is usually attached to stones or shells. After strong winds it is to be met with in great abundance on the shore, rarely with the Polypes in a living state; but they are easily obtained by dredging in from five to twenty fathoms, with the Polypes alive, and may be kept for a considerable time in an aquarium, if well supplied with sea-water.

Tubularia ramea frequents the same localities, is found attached to shells or stones, and is to be obtained under the same circumstances as the preceding species.

Herring-bone Coralline (*Thoa halicina*.) Is not so common as the foregoing species, but is not rare; grows on oyster and other shells in deep water, and after stormy weather is to be found on the shore from Formby to Crossens.

- Sea Fir** (*Sertularia abietina*.) A beautiful and abundant species and like many others of this family is parasitic on stones and shells in deep water; it is rarely found with living Polypes, but in deep dredging is to be obtained in a living state; it is found encrusted with small serpulæ.
- Fern Coralline** (*Sertularia filicula*.) This common but beautiful species is frequently to be found with its Polypes alive, attached to the larger species of sea-weed, and like the last species is commonly encrusted with small serpulæ.
- Sea Hair** (*Sertularia operculata*.) Very common; on small shells and coarse sea-weed, and being found in shallow water is easily obtained.
- Squirrel's Tail Coralline** (*Sertularia argentea*.) Very common; growing on oyster and other shells, and on the roots and stems of the larger Fuci. Some of the most beautiful specimens I have met with were parasitical on the shells of *Pholas candida*. From its dense mode of growth, and the length and softness of its branchlets, it has acquired the common name of Squirrel's Tail Coralline. After high tides or stormy weather it is thrown on the shore in large masses from Formby to Crossens.
- Sea Cypress** (*Sertularia cupressina*.) Is occasionally found on the shore after strong westerly winds; it is an elegant species, and procurable by deep dredging.
- Sea Spleenwort, or Polypody** (*Thuiaria articulata*.) On shells and stones, but of rare occurrence; only to be obtained with its Polypes alive from deep water.
- Lobster's-horn Coralline, or Sea-beard** (*Antennularia antennina*) Parasitic on shells and stones in deep water, forming dense clusters; it is a most beautiful species, and is often

dredged up off Southport, attached to scallop shells. After heavy gales it is frequently thrown ashore in such abundance that it is collected for sale.

Antennularia ramosa. This is considered only a variety of the last species, is often found mixed with it on the shore, but is less common than the unbranched kind.

Sickle Coralline (*Plumularia falcata*.) A beautiful species, and may be found on the receding of the tide, in large quantities; parasitic on shells or stones, and also frequently unattached. It is to be obtained in shallow as well as deep water, with its living Polypes.

Plumularia setacea. Common on shells, other corallines, and the larger Fuci, growing in loose tufts; affects shallower places than many other kinds, and consequently is more readily obtained with its living inhabitants.

Knotted-thread Coralline (*Laomedea geniculata*.) Grows on the stems and fronds of the larger Sea-weeds, in considerable clusters, particularly on such as grow at about low-tide mark; it is also brought on shore by high tides, in great quantities.

Small Climbing Coralline (*Campanularia volubilis*.) A small, but interesting species, frequently growing on other Corallines, and unoccupied crab and lobster shells.

Spongy Foliateous Coralline (*Membranipora pilosa*.) Occasionally on shells, but very abundant on the smaller sea-weeds.

Broad-leaved Horn-wrack (*Flustra foliacea*.) Very abundant, growing on rocky and stony places about low-water mark, also on indurated mud; it is cast ashore in large quantities, and varies considerably in the breadth and shape of its fronds.

Creeping Stony Coralline (*Cellularia scurpsea*.) Abundant on sea-weeds, corallines, and water-worn shells.

Bugle Coralline (*Salicornaria farciminosides*.) Plentiful on old shells and corallines; it is a beautiful species, and is brought up from deep water; after tempestuous weather is cast ashore in great abundance.

Silk Coralline (*Vesicularia spinosa*.) Common on the shores of the Mersey, and on Southport shore from Formby to Crossens: inhabits deep water, but is thrown up in quantities in heavy gales and high tides.

Aloyonidium hirsutum. Sometimes found in considerable quantities on the Southport shore; at other seasons it is exceedingly rare. This family forms one of the connecting links between the animal and vegetable kingdoms; the *Aloyonidium gelatinosum* has been considered by some of our most acute botanists as a vegetable production.

Halichondria palmata. This elegant but very common sponge is found freely from Southport to the Mersey; it is an inhabitant of deep water, and is cast ashore in large quantities after storms. The fishermen often bring up large specimens when dredging in deep water.

FORAMINIFERA OF SOUTHPORT.

(FROM PROFESSOR WILLIAMSON.)

-
- Lagena vulgaris typica.*
Lagena vulgaris var. clavata.
Lagena vulgaris var. perlucida.
Lagena vulgaris var. striata.
Lagena vulgaris var. gracilis.
Lagena vulgaris var. substriata.
Entosolenia globosa typica.
Entosolenia globosa var. lineata.
Entosolenia marginata var. lucida.
Entosolenia squamosa typica.
Nodosaria radícula.
Nodosaria pyrula.
Dentalina subarcuata typica.
Cristellaria subarcuatula.
Nonionina Jeffresii.
Polystomella umbilicatula.
Planorbulina vulgaris.
Bulimina pupoides.
Polymorphina lactea typica.
Polymorphina lactea var. oblonga.
Polymorphina lactea var. communis.
Spirillina foliacea.

CHAPTER XII.

——— “Oh! thou most courted, most despised,
And but in absence only prized,
These are thy walks, oh, sacred health!
The monarch's bliss, the beggar's wealth;
The seasoning of all good below
The sovereign friend in joy and woe.”

SUGGESTIONS FOR EXCURSIONS.

Although not so highly favoured as many towns, yet there are, within a tolerably short journey, some few places well worthy a visit from any sojourner in Southport, and to these, the mode of reaching them, and their principal objects of attraction, we purpose devoting a few brief notices.

CHURCHTOWN.—This antiquated village possesses no particular attraction of itself; nevertheless, no one should plead guilty to the charge of not having visited it. To the invalid the ever-useful donkey carriage presents an easy mode of travelling the two miles which it is distant from Southport. To those who wish to “run and read” a well appointed omnibus does the distance in some half hour, stopping alternately at the good and old-established hostleries of the Hesketh Arms and the Bold Arms, while to the pedestrian three or four distinct paths are open, all equally pleasant: the first of

these lies directly in continuation of Lord-street, and leads through a somewhat sinuous valley between ranges of sand-hills; the valley itself being carpeted with verdure, and abounding with many of the plants peculiar to such a position. Gaily-coloured butterflies and sand lizards abound in this locality, and countless numbers of rabbits at sundown disport themselves in all directions. There is no danger of not finding what we will assume is to be the terminus of the walk, for the spire of the venerable church is an excellent landmark; on the route several cottages will be passed, and by the "click, click" which falls upon the ear, we may know that the loom is at work—and most probably on some choice and elegant piece of satin, which ere long may encircle the graceful form of some of our famed Lancashire Witches. The church has nothing remarkable, save a marble tablet by Nollekens, to the memory of one of the Hesketh family. The churchyard abounds in numerous instances of the longevity of the inhabitants. A new school has just been completed in connection with this church, on a large scale, and will repay an inspection. There are some other places of worship in the village, none of which however call for any special remark. A large brick mansion some little distance from the church is known as Meols Hall, once the seat of the Heskeths, now occupied by a flourishing agriculturalist. A fair, and mock-mayoralty, is held here on the Monday and Tuesday nearest the 20th of August. Adjacent to the church are situated some celebrated strawberry gardens, which are noted for the almost fabulous quantities of fine fruit they produce in favourable seasons, and also as being held by the immediate descendants of Mr. Sutton, before mentioned as the founder of

Southport. These gardens are visited by great numbers of persons during the fruit season, and every attention and accommodation is provided for the public, whether their inclinations lead to "strawberries and cream," or merely to the possession of a choice bouquet of real old-fashioned flowers—which

"Grow among balm, and rosemary, and rue."

"The shining pansy trimmed with golden lace;
The tall topped lark-heels feathered thick with flowers;
The woodbine, climbing o'er the doors in bowers;
The linden tufts of many a mottled hue;
The pale pink pea, and monkshood darkly blue;
The white and purple gillyflowers, that stay
Lingering in blossom summer half away;
The single blood walls, of a luscious smell,
Old-fashioned flowers which housewives love so well;
The columbines, stone blue, or deep night brown,
Their honey-comb like blossoms hanging down;
Each cottage garden's fond adopted child,
Though heath still claims them, where they yet grow wild;
With marjoram knots, sweet briar and ribbon grass,
And lavender, the choice of every lass."

Further distant in the same direction is CROSSENS—formerly Cross-sands—having a church and resident incumbent; and still further is Banks—a few scattered domiciles—so called from the banks or embankments erected to keep off the encroachments of the sea. To the botanist we cannot too highly recommend the walk along the banks from Crossens towards Southport. In addition to the delightful sea breeze, he will find plenty of occupation on the slopes, which are the *habitat* of hundreds of wild flowers and mosses.

BIRKDALE.—This rapidly increasing suburb of Southport consists principally of detached or semi-detached villas, and is fast rising into favour amongst permanent residents. The air is somewhat more bracing than in Southport, and is well-suited for persons in good health. A cricket club is open in the summer months, which visitors may join on certain conditions, and a beautiful bowling-green is attached to the Park Hotel, which is the terminus of a visiter's ramble (except by rail,) in that direction. An excellent asphalted road, forms a pleasant means of reaching Birkdale, and all trains, except the express, stop at the station, to take up and set down passengers. The distance by railway is one mile, by road a little more.

FORMBY.—This village is distant from Southport about eight miles, by the railway; it may also be reached by walking or driving along the sands, which are perfectly safe. A church has been recently erected near an ancient burial ground in the sandhills. The dates of some of the primitive head-stones are very remote. Formby Hall is occupied by Miss Formby, the descendant of a very ancient family; it was built in the fifteenth century.

INCE BLUNDELL.—This place is justly noted. Ince Hall, about ten miles from Southport, (by the Crosby Railway,) was formerly occupied by the descendants of a family who had been lords of the manor from the time of the conquest. The estates are now held by Thomas Weld Blundell, Esq., to whom they were bequeathed by Charles Blundell, Esq. In the grounds is a model of the Pantheon at Rome, but only two-thirds the size; within it is placed a rare and valuable assemblage of ancient statues, busts, bas-relievos, sarcophagi, urns, and other valuables; also, a large collection of pictures.

The whole of these were accumulated by Henry Blundell, Esq., who also erected the building in which they are contained. It is right to observe, that admission to view this most interesting exhibition is only to be obtained under special circumstances.

HALSALL AND LYDIATE ABBEY.—In a south-easterly direction from Southport, distant respectively about six miles and nine miles, are the villages of Halsall and Lydiate. They can only be reached by special conveyances, but both may well form a summer day's excursion. Leaving the Ormskirk-road, before reaching the bridge crossing the canal, we emerge into a beautiful lane, bounded by well-cultivated fields, and luxuriant though not lofty trees. Before reaching Halsall Church, whose spire has been a conspicuous object on the journey, some fragments of an ancient ecclesiastical building may be seen in the grounds attached to the rectory. The church itself contains several monumental marbles and effigies. The village of Halsall contains nothing else worthy of note, except Halsall Hall, a large old-fashioned brick building, occupying the site of an ancient family seat of the Halsalls. Proceeding onwards towards Lydiate the road for some distance is on the red sandstone rock, which here crops out to the surface, and quarries have been formed for working the same. Lydiate Hall, on the right of the road, is an ancient building with wood and plastered front, painted in ornamental designs—black and white. According to Baines, "one of the upper rooms has been used as a Catholic chapel ever since the Reformation; for this purpose the edifice called Lydiate Abbey, a picturesque ruin, a little south of the hall, was intended by its founder, one of the Irelands. Over the arch of the porch is their coat of arms, a chevrin between six fleurs-de-lis, and on the spring

of the arch are the initials of John Ireland, who lived in the commencement of the reign of Henry VIII. The remains consist of a castellated tower, with pinnacles and buttresses, partly wrapped in ivy. The parapet of the south wall is castellated, and beneath are buttresses separating the four windows of the south side, which are divided by chipstones into squares with arched heads. In several parts of the east window fragments of glass have been found in the mortar, whence it may be inferred that the chapel was finished, in opposition to the opinion which has been expressed, that it was discontinued. The interior is overgrown with brambles and grass, amongst which two or three decayed gravestones are discerned bearing inscriptions which are now scarcely legible." A main stem of the ivy, which so beautifully mantles this interesting ruin, was divided by some Vandal very recently. Immediately adjoining the abbey is a burial ground, more recently formed, for the Catholic population of the district. A new and elaborately built chapel has also been lately erected, principally through the munificence of the late Charles Blundell, Esq., of Ince Hall. Beyond Lydiate, and still nearer Liverpool, is Sefton, and its ancient church, said to have been erected upwards of seven hundred years, and containing a number of monuments to the Molyneux family. On the west of Sefton are the villages of Crosby and Waterloo.

BURSCOUGH.—Distant about one and a half miles from Ormskirk, are the ruins of the once famous Abbey or Priory of Burscough: very little, however, remain standing; they are situated in a meadow, on the left of the line of railway, on the route to Ormskirk. This was, for a long period, the burial place of the Derby family.

LATHOM.—This interesting locality may be visited either *vid* Ormskirk, distant three miles, or by alighting at Newburgh Station, on the Manchester line of railway, from which it is a pleasant walking distance. The route to the park takes the visiter through Lathom Wood—a most agreeable change to the pent-up denizens of our manufacturing towns—with its lofty elms, beeches, and sycamores; in the wood is the site of an old stone quarry, still, however, occasionally worked; but the ivy has completely covered the engine house, and converted the otherwise smoke-begrimed building into a fitting ornament for this secluded dell. A stream runs through the wood, crossed by a rustic bridge, in the interstices of which grow the beautiful little *Asplenium-ruta-muraria*, also the *Scolopendron*; indeed, there is ample work for the botanist, who may be sure of securing a well-filled vasculum. Large iron gates separate the park from the wood, and Lathom House may be seen at a short distance. The present mansion which is now (1859) being again re-modelled, is not the Lathom House so well-known by its heroic defence, by the celebrated Countess of Derby, in 1644—that mansion having been razed in the last century. The siege of Lathom continued from 27th of February, in that year, until the 27th of May, the besiegers losing 500 killed and 140 wounded, whilst the besieged only lost six men. In the following year, however, the siege was again renewed, and after a gallant and successful stand under Colonel Rostorne, the garrison were obliged to succumb, their ammunition being all expended. “In 1714, this estate was transferred by marriage to Lord Ashburnham, by whom it was sold to Mr. Henry Furness, who, in 1724, disposed of it to Sir Thomas Bootle, Knight, of Melling, in this county. His

niece, and heiress, married Richard Wilbraham, Esq., of Rode Hall, in Cheshire." The estate is now in the possession of Lord Skelmersdale, who succeeded to the title of his grandfather, when a minor. The park was the scene of great rejoicings last year (1858), on the occasion of his lordship coming of age. If the visiter passes through the park, the walk may be prolonged to Ormskirk, noted principally for the irregularity of its church having both a spire and a steeple—popularly, but, no doubt incorrectly, accounted for, as the work of two maiden ladies, who each embellished the church after their own style of architecture. The more probable theory, however, is, that the church originally possessed a spire, and that the huge tower (nine yards square inside) was erected to place therein a portion of the bells removed from Burscough Priory at its suppression. According to an inscription, on a brass plate, within the church, a family named Mosock, had had their burial place there for 385 years. This is dated 1661. The ancestors of the present Earl of Derby have also, for a lengthy period, had their burial place within this edifice, though, we believe, no more of the family will be interred therein. On the high road from Ormskirk to Southport, about three or four miles from the former, are the well, reservoir, and works of the Southport Waterworks Company. An order, easily obtainable, will be required to get admission; but they are well worthy of a visit, from their compactness, and as being one of the most modern specimens of hydraulic engineering.

RIVINGTON PIKE AND ITS LAKES.—Although more distant from Southport than the places previously named, yet, as the excursion may easily be made in a day, it may fairly be within

our scope to introduce Rivington Pike and its no less famous Lakes, amongst the objects of interest to our visitors. Rivington lies east from Southport, and probably the best mode of reaching it is by rail to Bolton; thence on the Bolton and Preston line to Adlington, distant about seven miles. From hence, by a beautiful and gradual ascent, we proceed towards the "Pike;" having walked some three miles, we at length reach the Great Anglezark Lake or reservoir, the first of the series of these lakes, which, as is well known, supply Liverpool with water, by means of huge iron pipes reaching from hence to that town, some forty miles. The Anglezark is about one mile and three quarters in length, and bears a great resemblance to Windermere, the embankment causing the lake to appear in a valley. It varies very materially in width, but is altogether an immense sheet of water, and a stranger would little suppose that it was an artificial production. A road crosses the foot of the Anglezark, and also the next reservoir, which is smaller than the first, dividing the mass of water into three parts, all however connected by massive stone-work channels or weirs. At the head of the central lake is the elegant mansion of Peter Martin, Esq., of Bolton, commanding a most extensive view. A little island opposite is the retreat of sundry aquatic birds, including some fine swans. Reaching the division between the second and third lakes, a good wide road takes over the valley to the "Pike" side, and immediately before us is Rivington Church. This ancient edifice was built by Richard Pilkington, lord of the manor of Rivington, whose third son, James, was master of St. John's College, Cambridge, and one of the six divines for correcting the Book of Common Prayer; for which and other services he

was in 1560 created Bishop of Durham, being its first Protestant prelate. He died at Auckland, January 23rd, 1575, in the 55th year of his age. This bishop founded and endowed the free school of Queen Elizabeth at Rivington with lands and rents. The school (near the church) is for the "bringing up, teaching, and instructing children and youth in grammar and other good learning, to continue for ever." And by the terms of the letters patent, the school is open to "all our faithful and liege people, wheresoever they be." The path to the church is steep. A detached little building in the churchyard contains the bell or bells of the church. Higher up the hill is a Unitarian Chapel, and the most rural of burial grounds; many of the graves have gay little parterres on their summits, and the whole indeed seems "a place for the weary to be at rest." Leaving the chapel to the left, a road across the side of the hill leads to a most romantic spot, known as "Shaw's Clough." This is a hilly gorge, overhung with large trees, whose roots have insinuated themselves into the interstices of the shaly rock; many of the trees have been thrown down, tearing away with them large portions of the rock itself into the channel below. Adown this gorge runs a streamlet of the purest water, and the margins of the pools are an entangled mass of wild flowers, ferns, and mosses. The Golden Saxifrage (*Chrysosplenium oppositifolium*) is especially abundant in the early part of the summer; also the Lesser Celandine (*Ranunculus ficaria*), bearing its starlike blossoms by thousands—

The first gilt thing
That wears the trembling pearls of spring.

The Wood Anemone (*Anemone nemorosa*), with its white

solitary flowers, slightly purplish on the exterior, literally covers the hill side and portions of the "Clough." Here also was truly the Wood Sorrell's home (*Oxalis acetosella*) with its delicate

———"Flowers shrinking from the chilly night,
Drooping and shut up; but with fair morning's touch,
Rise on their stems all open and upright."

Proceeding up the glen we come upon a little waterfall, streaming down from the cleft-rocks above, the water bright and shining as molten silver, and, when falling on the shelving rocks below, seeming like pounded diamonds, so glittering in the sun's rays, which manage here and there to obtain admittance through the dense mass of foliage above and around us. To gain the summit of the "Clough" almost requires the agility of an Alpine goat, it is so precipitous. Having reached the top of the hill, the pedestrian may, before ascending the "Pike," take his rest at a modest-looking hostelry, called by the painter, the "Sportman's Arms." Hence we can reach the hill, or "Pike," in about twenty minutes. From here, on a clear day, the prospect is most extensive, and not the least interesting is the splendid range of lakes at our feet, computed to contain 120 days' consumption of water, at the rate of 24,000,000 gallons per diem! From this point there is also an excellent view of the filtering beds of the waterworks. Northward and eastward is a large tract of wild moorland. On the summit of the Pike is a square stone tower, bearing date 1733. Descending the hill, we pass Jacob's Well, which, from overflowing, causes the vicinity to partake of the nature of a swamp. If not deemed too lengthy, the pedestrian may return to Southport, *via* Horwich, to

Lostock Junction, a pleasant but rather circuitous walk after the day's ramble, which, we believe, will be found one of the most interesting in this locality, should the weather prove favourable.*

ASHURST BEACON AND PARBOLD HILL.—The route to these places is by the Manchester Railway to Newburgh. Ashurst Beacon is on the right of the line of rail; Parbold on the left. At the foot of Ashurst is the river Douglas, and the village of Dalton. Ashurst Hall, built some time in the fifteenth century, is a large building now used as a farm house. It was, in 1751, bought by Sir Thomas Bootle, of Lathom, ancestor of the present Lord Skelmersdale. From the top of the hill there is a most extensive and varied prospect. In the time of the French revolutionary war, according to Baines, a beacon was erected on the high hill of Ashurst, when the danger of French invasion was proclaimed by the prime minister to be so near, that we were not to calculate the time of the enemy's arrival by months and weeks, but by days and hours, and men were placed day and night upon the watch-tower to announce the landing of the invader. Fortunately the torch was never lighted, and the women of England, who for seven centuries have never seen the smoke of the enemy's camp, were not doomed to see the light even of their own beacon. The building is formed of strong masonry, with the entire absence of any material in its composition that is inflammable.

PARBOLD HILL is also surmounted by a stone structure, and though inferior in altitude to Ashurst, nevertheless commands an extensive prospect. Here are large stone quarries, by which Southport is extensively supplied. At the foot of the

* Abbreviated from a previously published account by the Writer.

hill runs the Leeds and Liverpool Canal. At some little distance from Parbold is Wrightington Hall, the property of Charles Scarisbrick, Esq., one of the lords of the manor of Southport. The park abounds with game and deer, and is renowned for its beautiful scenery.

LYTHAM AND BLACKPOOL, &c.—These rival watering places, situated at the north of the Ribble, claim a passing notice, inasmuch as when the contemplated pier from Southport to low-water is completed next year, they will both reasonably fall within the range of a day's excursion, should any spirited steamboat proprietors think fit to make use of the facilities which the said pier will give for embarking and landing passengers. Lytham consists chiefly, as Southport formerly did, of a main street, running east and west on the banks of the Ribble, which is here of considerable breadth. It contains some excellent inns, numerous lodging-houses, a good market, and a fine Promenade. The shore, unlike Southport, is of a pebbly character, by no means so desirable as a sandy bathing ground.

BLACKPOOL dates its origin as a sea-bathing place somewhere about one hundred years ago; it is exposed to the open sea, which recedes but a short distance from the foot of the Promenade. Little can be said in favour of the older portions of the town, though improvements are proceeding; but the modern mansions, villas, and buildings are worthy of admiration. There is a great influx of visitors during the season, which, however, is by no means so lengthy as our own.

Further to the north we have the still more modern watering-place of FLEETWOOD-UPON-WYRE, also having considerable claims on our notice, both as a place of resort for

bathing and also commercial purposes; and—but we must travel no further or we shall take the round of the county, for in these days of railway speed where may we not go to and return from within the range of a long summer's day?

A DAILY REGISTER OF THE
For One Month in each Quarter, viz.,

	FEBRUARY.				MAY.			
	Mean Temp.	Dew Point.	Barometer.		Mean Temp.	Dew Point.	Barometer.	
1	36	32	30.	Lowest do., 20 deg.	47	42	29.1	Highest do., 46 deg.
2	34	30	30.		45	40	29.5	
3	39	37	29.7		50	44	29.6	
4	46	42	29.5		52	49	29.9	
5	46	42	29.8		56	49	30.	
6	49	43	29.9		57	50	30.6	
7	48	42	29.6		58	52	30.4	
8	36	34	30.		63	55	30.4	
9	38	33	30.1		51	49	30.4	
10	38	34	30.1		59	50	30.3	
11	38	35	30.2	Highest temperature on grass during the Night, 46 deg.	61	54	30.3	Lowest temperature during Night on the grass, 29 deg.
12	36	32	30.2		56	47	30.	
13	38	36	30.3		52	49	29.9	
14	37	34	30.1		57	52	29.8	
15	38	30	30.2		55	50	29.6	
16	38	34	30.2		58	52	29.7	
17	36	32	30.2		60	55	29.8	
18	38	32	30.2		62	56	29.8	
19	34	30	30.		60	53	29.8	
20	40	33	30.		63	55	30.1	
21	39	33	30.	Highest temperature on grass during the Night, 46 deg.	56	52	29.9	Lowest temperature during Night on the grass, 29 deg.
22	40	34	30.		61	55	29.8	
23	38	32	29.9		60	55	29.8	
24	38	36	30.1		58	52	29.8	
25	38	34	30.5		57	50	30.1	
26	38	36	30.3		58	51	30.5	
27	40	38	30.3		58	45	30.3	
28					55	50	30.3	
29					62	54	30.3	
30					50	54	30.2	
31					66	59	31.1	

These Tables have been kindly furnished

THERMOMETER & BAROMETER

—*February, May, August, November.*

AUGUST.				NOVEMBER.			
Mean Temp.	Dew Point.	Barometer.		Mean Temp.	Dew Point.	Barometer.	
68	60	30.4	Lowest do., 41 deg.	46	44	30.6	Lowest do., 14 deg.
67	58	30.2		58	51	30.6	
64	62	30.		49	47	30.5	
64	60	30.		49	47	30.5	
66	62	30.		52	49	30.4	
64	58	30.2		45	39	30.6	
68	60	30.5		40	34	30.6	
67	62	30.5		45	43	30.5	
74	63	30.5		44	41	30.5	
73	66	30.4		45	43	30.6	
72	66	30.3	Highest temperature on grass at Night, 55 deg.	48	46	30.5	Highest temperature on grass during night, 36 deg.
73	68	30.2		41	39	30.2	
65	60	33.2		43	41	29.8	
64	59	30.2		41	39	29.7	
62	58	30.2		41	38	29.7	
63	60	30.1		40	37	29.7	
63	60	29.9		41	39	29.8	
69	62	29.9		38	35	29.9	
66	61	29.9		40	37	29.9	
62	55	30.		40	38	30.1	
64	58	30.	Highest temperature on grass during night, 36 deg.	40	38	30.2	Highest temperature on grass during night, 36 deg.
62	60	30.1		32	28	30.3	
68	64	30.2		29	28	30.3	
62	60	33.3		32	28	30.	
62	58	30.3		39	38	29.5	
61	53	30.3		32	27	29.3	
56	54	30.1		29	27	29.2	
60	54	30.2		40	38	29.2	
58	54	30.1		45	40	29.2	
58	54	29.8		44	43		
60	56	29.8					

by *Mr. James Kershaw, chemist, Southport.*

COMPARATIVE RETURNS

From Seven different Places of Fall of Rain, Comparative Humidity, and Mean Temperature, for each Quarter of the Year.

	Quarter of Year.	Mean height of Barometer.	Mean Temperature.	Highest Temperature.	Lowest Temperature.	Dew Point.	Number of days on which Rain fell.	Amount of Rain.
GREENWICH.....	1	29.8	40.	64.	13.	35.	30	4 in.
	2	29.6	51.	78.	28.	45.	36	7.
	3	29.	59.	88.	37.	52.	36	7.
	4	29.	43.	72.	25.	39.	57	6.
SOUTHAMPTON	1	29.8	39.	60.	24.	38.	35	6.
	2	29.6	52.	74.	27.	43.	40	8.
	3	29.4	58.	78.	43.	52.	28	6.
	4	29.7	44.	64.	13.	39.	43	8.
WORTHING.....	1	29.8	40.	56.	23.	37.	35	6.
	2	29.6	51.	68.	31.	41.	30	7.
	3	29.	59.	80.	43.	52.	24	7.
	4	29.	44.	63.	28.	40.	45	9.
CLIFTON	1	29.9	40.	60.	15.	36.	35	4.
	2	29.6	50.	79.	26.	43.	41	9.
	3	29.6	58.	79.	38.	52.	39	12.
	4	29.	44.	67.	21.	39.	60	7.
ISLE OF MAN...	1	29.8	41.	55.	19.	38.	49	4.
	2	29.6	49.	70.	27.	42.	36	4.
	3	29.	55.	73.	41.	51.	33	5.
	4	29.5	45.	60.	28.	39.	57	10.
BOWDON.....	1	29.8	41.	59.	10.	36.	45	6.
	2	—	43.	—	—	—	—	—
	3	—	—	67.	24.	40.	—	6.5
	4	29.	42.	63.	12.	37.	63	9.
SOUTHPORT.....	1	29.5	40.3	62.	30.	37.	21	5.3
	2	29.6	59.4	67.	41.	52.	28	3.3
	3	30.	64.7	90.	49.	58.		4.8
	4	30.2	49.8	64.	25.	44.		7.3

COMPARATIVE HUMIDITY AND TEMPERATURE

*Of several Places, for One Year, from June, 1852,
to May, 1853.*

	Mean Temp.	Dew Point.		Mean Temp.	Dew Point.
July, 1852.			January, 1853.		
Exeter	64.7	56.3	Clifton	41.5	37.4
Manchester	67.9	57.5	Manchester	40.6	37.
York	64.5	55.7	Alderley Edge.....	39.3	36.1
Southport.....	66.5	62.9	Bowdon	40.2	36.1
August, 1852.			York	39.1	36.6
Exeter	60.5	54.	Southport.....	41.	39.2
Manchester	60.9	56.7	February, 1853.		
Leeds	60.8	51.8	Clifton	33.4	28.6
York	59.1	53.	Manchester	32.8	31.2
Southport.....	66.5	64.	Alderley Edge.....	32.1	27.8
September, 1852.			Bowdon	33.	29.3
Exeter	55.3	50.	Wakefield	32.5	29.
Manchester	54.3	48.2	Southport.....	38.7	36.
York	58.	49.	March, 1853.		
Southport.....	61.1	59.3	Clifton	38.	32.
October, 1852.			Manchester	38.2	34.7
Exeter	48.	46.9	Alderley Edge.....	36.4	31.5
Manchester	44.6	40.1	Southport.....	44.	42.
Alderley Edge.....	45.	39.8	April, 1853.		
Bowdon	44.5	39.7	Clifton	45.3	40.
York	45.5	41.6	Manchester	45.6	37.2
Southport.....	57.8	54.2	Alderley Edge.....	44.3	36.7
November, 1852.			York	45.1	39.9
Exeter	48.9	46.6	Southport.....	51.	47.5
Manchester	45.	41.8	May, 1853.		
Alderley Edge.....	44.	40.6	Clifton	51.2	43.5
Bowdon	44.5	41.2	Manchester	51.6	40.5
York	43.5	40.9	Alderley Edge.....	49.9	40.2
Southport.....	44.3	43.2	Bowdon	52.	41.4
December, 1852.			York	49.5	38.6
Exeter	48.5	44.7	Southport.....	57.	51.
Manchester	45.2	41.3	June, 1853.		
Alderley Edge.....	44.5	40.3	Clifton	55.8	50.4
Bowdon	45.	41.5	Manchester	58.6	48.7
York	43.9	40.2	Bowdon	57.8	49.9
Southport.....	47.7	45.4	York	56.5	52.4
			Southport.....	65.	59.3



